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An Address.[1]

By T. G. H. HOGG,

Retiring President of the Tasmanian Branch of the British Medical Association.

THIS afternoon I have the honour of delivering the presidential address. We who are living in the middle of the twentieth century must realize that we are in an era of change, the era of socialization. This period is affecting the medical profession throughout the whole world. There have already been dynamic changes in New Zealand and England and soon both America and Australia will be involved.

In times such as these much help and information are obtained by reverting to history, and I propose this afternoon to give you an outline of the foundation of the British Medical Association, its aims and objects and some of its accomplishments.

The whole period 1830-1834 was momentous in English history. England had largely recovered from the economic depression following wars with France and the people were full of inventive energy.

During these years the first Reform Bill was passed, much progress was made in industry, the first passenger railway was opened and iron and steam vessels were on trial.

In medical practice, as in industry and invention generally, great changes were happening, but the profession had no means of making its influence felt. The profession was neither organized nor defined, for there was no hard and fast line drawn between the qualified and the unqualified practitioner, nor could the public distinguish the reputable practitioner from the quack.

[1] Read at the annual meeting of the Tasmanian Branch of the British Medical Association on February 4, 1950.

Charles Hastings.

In times of great stress and strain, England has always produced the man of the hour, and the man of the hour for medicine was Charles Hastings.

Charles Hastings, the founder of the Association, was born at Ludlow in Shropshire on January 11, 1794. From an early age he showed a marked tactfulness which was one of his greatest assets in his succesful efforts to found the Association. He was educated at Worcester, was later apprenticed there to two surgeons, and finally in 1818 he obtained his medical degree at Edinburgh.

Soon after qualification he was elected a physician to the Infirmary, Worcester, and was soon accepted as the leader in medicine in Worcestershire and the surrounding counties.

In 1828, with the view of raising the tone of provincial medical practice and supplying a medium for the interchange of opinion and the diffusion of knowledge, he started a quarterly journal, *The Midland Medical and Surgical Reporter*. This journal was the forerunner of the *British Medical Journal*.

In commencing this journal, he had in view the utilization of the valuable clinical material which existed in the provincial hospitals and the placing on record of pathological observations made within their walls.

It is interesting to note that in the farewell address in the last number, May, 1832, Hastings stated that the great object of their arduous undertakings had, from the first, been not only the mutual instruction of the members of the profession, but also the foundation of an association for the diffusion of medical knowledge.

The Provincial Medical and Surgical Association.

On July 19, 1832, Hastings called a meeting at the Worcester Infirmary, and at this meeting The Provincial Medical and Surgical Association was established.

The five principal objects of the Association were: (i) The collection of useful information, whether speculative or practical, through original essays or reports of cases occurring in provincial hospitals. (ii) Increase of knowledge of the medical topography of England through statistical, geological and botanical inquiries. (iii) Investigations of the modifications of endemic and epidemic disease. (iv) Advancement of medico-legal science through reports of whatever cases may occur in the provincial courts of justice. (v) Maintenance of the honour and respectability of the profession generally by promoting friendly intercourse and full communication of its members, and by establishing harmony and good feeling which ought ever to characterize a liberal profession.

It is worthy of note that of the five principal objects of the Association the first four dealt with scientific matters, and that only in the last were the honour and respectability of the profession maintained. Far were the founders of the Association from wishing to form anything like a trade union or a society merely interested in the selfish interests of the profession.

From this small inaugural meeting of 50 members in Worcester in 1832, the present British Medical Association grew. Branches of this association were soon established in other provincial cities in the British Isles.

The British Medical Association.

In 1856 the name of the association was changed by referendum from the Provincial Association to the British Medical Association. This change involved more than a change in name; it meant an expansion of the Association to include the metropolis (London) and it also meant moving sooner or later the centre from the provinces to London.

The spirit of the association has thus shown itself to be not averse from change, when change has been seen to be necessary, and we may with confidence foretell that the same spirit will lead to further changes when once again these are seen to be necessary.

Branches spread to the Colonies, and before long the association was flourishing throughout the British Empire.

The Australian branches in order of seniority are: (*a*) South Australia, 1879; (*b*) New South Wales, 1879; (*c*) Victoria, 1879; (*d*) Queensland, 1894; (*e*) Western Australia, 1899; (*f*) Tasmania, 1911.

Some of the Association's Early Accomplishments.

Let us look into some of the accomplishments of the British Medical Association in its early years.

Medical Reform.

The first step in the movement of medical reform was taken by the Association in 1839 when it presented to Parliament a document in which the crying needs of the profession and the public were set forth.

Much negotiation was carried out, but it was not until twenty years later, 1858, that the *Medical Act* became law. This Act fell far short of the work set out by the Association twenty years earlier. It was, however, the first really official recognition of the existence of the great body of medical practitioners and of their importance to the State.

This Act provided: (*a*) reciprocity of practice; (*b*) creation of a register of members of the profession; (*c*) preparation of a National Pharmacopœia; (*d*) formation of a General Medical Council.

The second amending Act in 1886 was the result of fifty-four years' struggle on the part of the Association. As regards permanent education, the threefold qualifications, in medicine, surgery and obstetrics, were made compulsory.

Poor Law.

From 1835 to 1905 the Association championed not only the rights of the general practitioner, but also the interests of the sick poor.

Public Health.

When the Association was founded such a science as public health was non-existent. The Association set to work on such subjects as sanitation and mental hygiene.

It also pressed for and obtained: (*a*) registration of births, deaths, and marriages; (*b*) compulsory notification of infectious diseases.

Midwives.

The Association drafted a Midwives Bill which provided for the training, examination and registration of midwives under the control of a Board. This Bill was some twenty years later passed by Parliament.

The Association can fairly claim to have made a substantial contribution to the development of the maternity and child welfare service and also to the creation of the school medical service.

These are but a few of the contributions that the Association has made to the community during the last century.

The Association Today.

The British Medical Association has frequently been charged with neglecting the public interest in the promotion of a narrow and short-sighted professional policy. The charges cannot be substantiated.

The main objects of the Association have never varied. These may be roughly defined as: the advance of knowledge of the incidence, cause, prevention, and cure of disease; the provision of adequate health service for the whole of the community, irrespective of individual economic circumstances; and the maintenance of conditions conducive to progressive standards of efficiency in medical practice and in the services auxiliary to medicine.

During the last year the British Medical Association in Australia has been bitterly and unjustifiably attacked by some politicians. It has been accused of grievously lacking in a sense of social responsibility and the profession has been held to be controlled by a few elderly ultra-conservative men whose only thoughts are monetary, who have no thoughts for either the profession or the patients. The cause of these attacks is well known to you all—it was the British Medical Association's opposition to the Federal Government's *Pharmaceutical Benefits Act* and to its threatened nationalization of medicine.

It is common knowledge that up to the present socialization of medicine in England has been a failure. It is unpopular with the public who realize they are fast losing the doctor-patient relationship, it is unpopular with the profession because they believe that the service they are giving is inferior to that given before socialization and that they are becoming clerks, and lastly it is unpopular with the Government because of the cost.

If the politicians in Australia had taken the trouble to read the history, aims and accomplishments of the British Medical Association for the country and the public in general during the last century, these attacks would never have been made.

The British Medical Association in Australia is a non-political association and it will fight any party which tries to interfere with its main principle—that is, seeing that the people of Australia get the best possible medical attention which is available.

CLINICAL ASPECTS OF POLIOMYELITIS DURING THE EPIDEMIC OF 1949.[1]

By Stanley Williams,
Melbourne.

During the past winter the burden on general practitioners through the poliomyelitis epidemic has been severe, and they carried well the anxious responsibility of stating whether a patient was suffering from poliomyelitis. Amongst the many activities of the Consultative Council

[1] Part of a symposium on poliomyelitis, read at a meeting of the Victorian Branch of the British Medical Association on November 16, 1949.

was the appointment of a panel of consultants. When my services were asked for, the doubtful case was considered from three points of view: (i) to help in diagnosis and advise the best treatment for the patient; (ii) to share responsibility with the family doctor, especially if the patient remained at home; (iii) to restrict as far as possible the admission to Fairfield Hospital of patients not really suffering from poliomyelitis.

I have examined 147 patients, 45 of whom were suffering from poliomyelitis, and 102 who were not. It is permissible to leave at home a paralysed patient who can be adequately looked after. I visualize the busy wards and hard-working nursing staff at Fairfield, and compare them with the individual attention from a wife or mother in a good home, and often advise the patient's remaining at home—especially if the signs are atypical.

Diagnosis of a Typical Case.

From the onset of symptoms poliomyelitis is a disease of the nervous system, the chief complaints of the patient being headache, pain in the back of the neck and pain in the lumbar region. That is the typical story heard during this epidemic.

On examination, the patient is feverish; there is neck and spine stiffness, with resistance to flexion of the head and spine, especially when the patient is sitting up, and persistent during the examination, persistent for a day, and often for as long as a week. At some variable stage paralysis becomes evident, and the diagnosis is then definite. Perhaps the patient is lucky and there is no paralysis, though a careful watch is needed for many weeks and also after the patient gets up for the doctor to be certain no muscle is weakened. The reflexes are a good guide, in addition to tests for muscle power.

Atypical Case which is Poliomyelitis.

It is impossible to diagnose with certainty the atypical clinical forms without the aid of lumbar puncture or in the absence of paralysis, and as no specific treatment is available, provided the patient is at rest in bed whilst being observed, it is permissible in the doubtful case for this observation to be carried out at home. The main precaution is the need for patients with respiratory failure to be in hospital as soon as possible.

Atypical Case which is Not Poliomyelitis.

As regards the atypical condition which is not poliomyelitis, the most frequent is the one characterized by prevailing muscular pains and in accordance with clinical tradition referred to as "influenza". Though some patients with severe poliomyelitis have generalized aching at the stage of paralysis, and others who later become paralysed complain of pain in the back of the thighs and the legs; generalized muscular pains away from the mid-line, especially in the early stages of the illness, are not a feature of poliomyelitis. Pain in the side of the neck, and pain in the back of the neck that lasts for only a few hours, are not like poliomyelitis. In many atypical cases a red throat and other features are present indicating streptococcal infection as the cause. That some of these cases are non-paralytic (so-called abortive) cases is possible.

It is best to regard as not suffering from poliomyelitis the patient who, though possessing the typical signs of poliomyelitis without paralysis, has negative cerebrospinal fluid findings.

Facial Paralysis.

One of the most interesting types of true poliomyelitis seen is that characterized by facial paralysis alone. During this epidemic I have seen seven such patients—three children and four adults. Recovery was rapid, and though the condition was like Bell's palsy, because of the preceding fever, because of its occurrence in infants in whom Bell's palsy is rare, and because of neck stiffness in three cases, I regard the illness as poliomyelitis. Overseas writers comment also on this condition. To me it shows a remarkable selectivity of infection just to pick out the seventh nerve nucleus. Perhaps the same could be said for all cases of paralysis associated with a single nerve lesion.

Non-Paralytic Cases.

Finally, in the clinical diagnosis of the disease when signs and symptoms are typical, the onset of paralysis and the findings on lumbar puncture are the only confirmatory evidence—and as the same applies to the atypical case, we shall never know how many non-paralytic cases there have been.

A most important addition to the current knowledge of the epidemiology of poliomyelitis has been made by Dr. B. L. McCloskey, and we keenly await his address.

RECENT DEVELOPMENTS IN THE EPIDEMIOLOGY OF POLIOMYELITIS, WITH SPECIAL REFERENCE TO THE EPIDEMIC OF 1949.[1]

By B. P. McCloskey,
Department of Health, Victoria.

THE limited time at my disposal tonight will permit me only to mention briefly a few of the epidemiological features of the present poliomyelitis epidemic. Before commencing I would like to draw your attention to the fact that when we use the term "epidemic" in connexion with poliomyelitis, we usually refer to an increased number of paralytic cases reported per unit of time. However, as has been shown, particularly by Casey, there is considerable evidence that during "epidemics" the number of non-paralytic and in fact non-symptomatic cases considerably outnumber the paralytic cases.

Also it should be pointed out that we have no knowledge of the incidence of non-paralytic poliomyelitis during "interepidemic" periods, although various theories as to

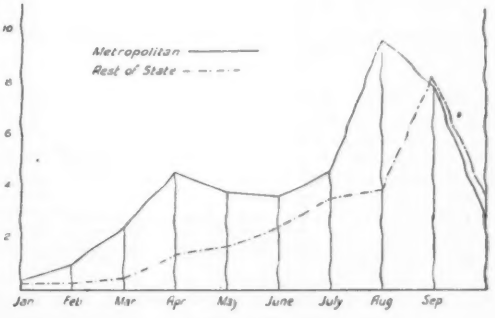

FIGURE I.
Poliomyelitis. Graph showing monthly incidence in cases per 100,000 of population.

this incidence have been advanced in order to explain various epidemiological features of poliomyelitis epidemics. Most of these theories are based on comparative studies of epidemics separated either in space or in time or in both. The basic assumption frequently made in such comparative studies, and one which is often not stated, is that the virus strain or strains operating in these epidemics are identical, and that variations in the epidemiological features are to be attributed to variations in the reaction of the host.

Even when the possibility or probability has been recognized that changes in the virus strain or type may be responsible for the different epidemiological patterns seen,

[1] Part of a symposium on poliomyelitis, read at a meeting of the Victorian Branch of the British Medical Association on November 16, 1949.

usually no attempt has been made to interpret the facts as at present known from the point of view of variations in both the host and the parasite.

Most theories make no mention of the possible role of increased traffic as a factor in the increasing incidence of reported poliomyelitis and in the altered epidemiological patterns seen.

Wickman's observation, made in 1905 in the remote parishes in Sweden, that poliomyelitis infection spreads only along lines of human communication, is just as true today as when first made, and seems to be the one feature constant to all epidemics.

In studies based on epidemics in a heterogeneous population in which peculiar epidemiological patterns occur, often no background against which to assess these statistics is given.

The point which I wish particularly to stress is that these theories are theories and not facts, and that there is a great need for caution in attempting to assess poliomyelitis statistics.

incidence steadily increased. Also it is evident that the over-all metropolitan incidence was higher than the country incidence until September, when the incidence in the metropolitan area and that in the rest of the State were almost identical.

Figure II shows in a little more detail this incidence in the metropolitan and country areas for both males and females. The first of the four graphs in this figure shows the monthly incidence in cases per 100,000 of population for males in the metropolitan area in the age groups nil to nine years, ten to nineteen years, and twenty years and over. The continuous line represents the incidence in metropolitan males aged under ten years, the interrupted line the incidence in metropolitan males aged between ten and nineteen years, the strokes the incidence in metropolitan males aged twenty years or over. The second of these four graphs similarly shows the monthly incidence in cases per 100,000 of population for females in the metropolitan area in the same age groups (nil to nine years, ten to nineteen years, and twenty years and over).

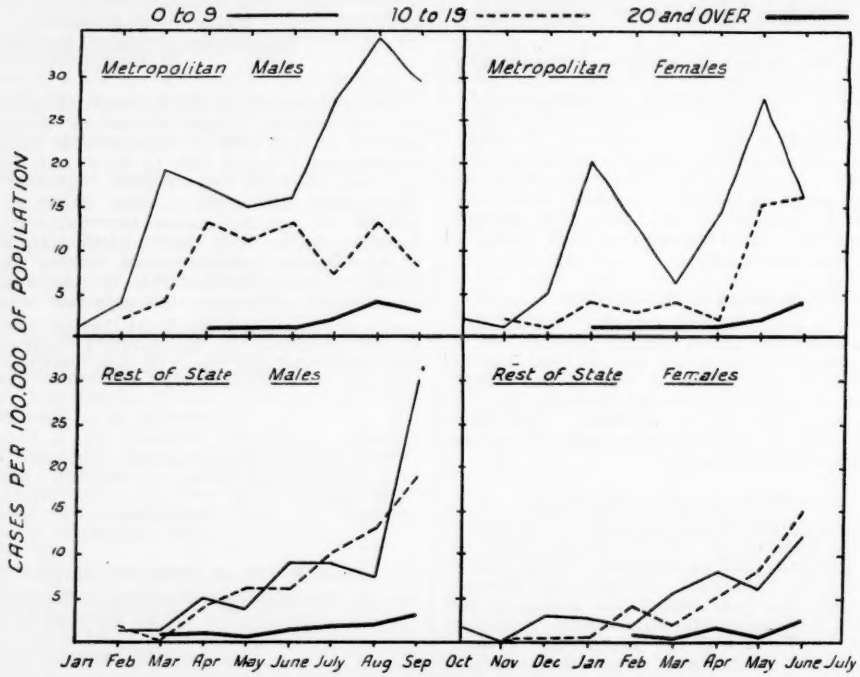

FIGURE II.

Poliomyelitis. Graph showing monthly incidence in three age groups, 0 to nine years, ten to nineteen years and twenty years and over.

There are five variables to be considered in connexion with poliomyelitis: (i) genetic factors—the autarceology of Aycock; (ii) the strain or strains of poliomyelitis virus and their prevalence in the community; (iii) the previous experience of the community at risk with the strain or strains of virus operating or with strains of virus immunologically similar to those operating; (iv) factors which determine paralytic as opposed to non-paralytic poliomyelitis; (v) barriers to, or facilities for, the spread of the virus in the community.

With these factors in mind I propose now to consider certain aspects of the age distribution of reported cases in the present epidemic.

The first graph (Figure I) shows the monthly incidence in cases per 100,000 of population during the present epidemic. The continuous line represents metropolitan incidence, the dotted line the incidence in the rest of the State.

It will be seen that there have been two peaks for the metropolitan incidence, during which time the country

The third graph similarly shows the monthly incidence for country males, the fourth graph that for country females.

I should like to draw your attention to the following points: (i) That for metropolitan males the maximal incidence was in the under ten years age group. (ii) That the peaks of incidence do not coincide for the different age groups in each graph, and further, that differences are seen between the peaks in the corresponding age groups in each graph. (iii) That the incidence for metropolitan females in the ten to twenty years age group showed a pronounced rise in August, which continued until September, reaching a higher figure in those two months than the incidence for the corresponding age group in metropolitan males. Also it should be noted that prior to August the incidence for females in this age group was much lower than for males. Thus it would appear as if there had been a deferring of incidence among the females in this age group in the metropolitan area from early to later in the epidemic as compared with the males. (iv)

That for the country males the incidence in the "under tens" and that in the "tens to twenties" were very similar and of the same order of magnitude except in September, when again there was a higher incidence in the "under tens" as seen in metropolitan males. (v) That for country females the incidence was highest in the ten to twenty years age group during August and September. (vi) That the over-all incidence for country females was considerably lower than for metropolitan females.

Figure III is a graph showing the incidence expressed as the number of cases per 100,000 of population in the various age groups.

There are several points of interest to be noted in this graph: (i) That the over-all incidence among metropolitan males was considerably greater than in any of the other groups, and that within this group the maximal incidence was in the five to nine years age group. (ii) That the incidence among metropolitan females was maximal in the nil to four years age group, and that for all age groups under fifteen years the incidence was considerably less than for metropolitan males, but that from fifteen years and over the incidence was more or less identical with

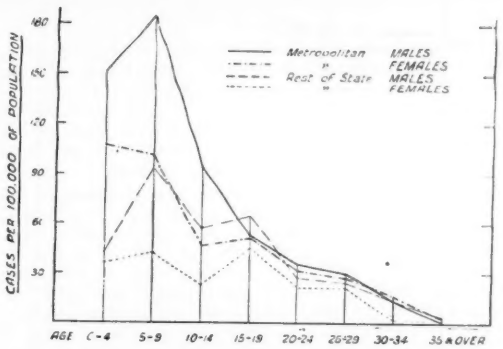
CASES PER 100,000 OF POPULATION
Metropolitan MALES
" FEMALES
Rest of State MALES
" FEMALES
AGE 0-4 5-9 10-14 15-19 20-24 25-29 30-34 35 & OVER

FIGURE III.

Poliomyelitis. Graph showing age distribution of cases reported in 1949.

that for the males. (iii) That the incidence for country males was maximal in the five to nine years age group, but showed another peak in the fifteen to nineteen years age group. For all age groups over this the curve was almost identical with the curves (i) and (ii) above. (iv) That the incidence for country females was maximal in the fifteen to nineteen years age group, although there was another, though smaller, peak in the five to nine years age group. The incidence for all groups for country females was less than for country males or for metropolitan patients.

These differences in age distribution among metropolitan males and females and country males and females require some explanation.

The fact that there is a higher age distribution in country cases compared with metropolitan cases is generally taken to indicate that there is a lesser degree of immunity in country than in urban residents, and evidence that age distribution does vary with dispersal of population will be presented later. Also it is generally stated that, as is the case with the other common infectious diseases, there is a deferring of incidence from an earlier to a later age group, with females compared with males. This is said to occur because there are extra barriers to infection in young females compared with males. However, although the maximal incidence among females in the current Victorian epidemic has been in the fifteen to nineteen years age group, nevertheless the general shape of the curve is similar to that for males, and at no time does the incidence among females ever exceed that among males. Thus there has been at no time deferring of incidence in this particular age group from a lower to a higher age group.

What, then, is the explanation of the lower incidence among females compared with males?

Here I shall again draw your attention to my opening remarks concerning poliomyelitis epidemics; the cases charted in Figure III are reported cases of poliomyelitis, practically all paralytic. We have no knowledge of the incidence of non-paralytic poliomyelitis in the same age groups, and it may well be that among males there is a higher proportion of paralytic to non-paralytic poliomyelitis except in the fifteen to nineteen years age group and in higher age groups.

Mortality Rates.

When one studies the mortality rates one finds that the mortality rate per 100 cases is twice as high for males as for females. Also one finds, as shown in Figure IV, that the mortality rate in cases per 100 of the population varies inversely with the incidence expressed in cases per 100,000 of population.

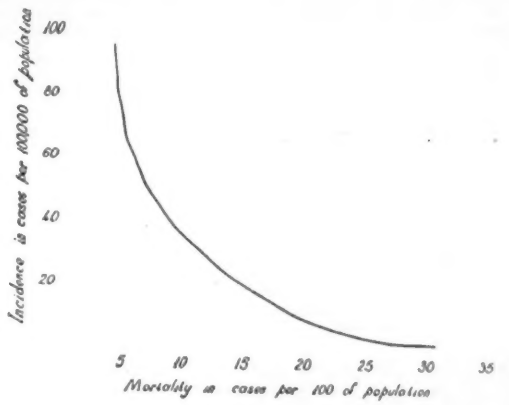

FIGURE IV.

Graph showing the mortality of poliomyelitis in relation to the incidence, in 1949.

However, as can be seen from Figure V, when one plots the mortality rate in deaths per 100,000 of population against age, one finds a small peak in the five to nine years age group and a large peak in the twenty to twenty-four years age group. This means that the actual number of deaths per 100,000 of population is greatest in the twenty to twenty-four years age group, although we have reason to believe that this is not the age group with the highest incidence of infection with poliomyelitis virus.

Also, as can be seen in Figure VI, when one plots mortality rate in deaths per 100 cases of reported poliomyelitis against the various age groups, one finds a sharp peak in the twenty to twenty-four years age group.

How can we explain these findings?

If we assume for the purpose of this discussion that the Victorian community is fairly homogeneous as regards racial characteristics, then there are three things to be considered: (i) That there is considerable evidence that the immunity of the populace to the poliomyelitis virus or viruses probably varies inversely with the age in years of the population, except in so far as it is modified by the various external barriers to infection. (ii) That there may be more than one strain of virus operating in an epidemic. (iii) That the ratio of paralytic to non-paralytic cases may alter considerably within the total number of cases.

Thus there are three variables: (i) immunity, itself modified by external barriers to infection and by prevalence of virus in the district; (ii) the strains of virus operating in the epidemic; (iii) factors which determine paralytic as opposed to non-paralytic poliomyelitis.

One of the factors known to determine the onset of paralytic poliomyelitis, particularly in males, is severe

exertion after the onset of the illness. Similarly, death from poliomyelitis is known in some cases to be related to exertion after the onset, and likewise to pregnancy in females.

If poliomyelitis was diagnosable only by death, then one would say that the poliomyelitis incidence was highest in the twenty to twenty-four years age group.

Similarly, when poliomyelitis is diagnosed by paralysis, we find the highest age incidence in the five to nine years age group. However, in neither case does this mean that the actual incidence of poliomyelitis infection is highest in that particular age group.

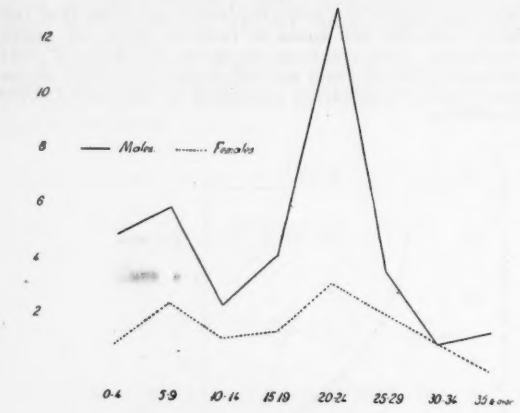

FIGURE V.

Graph showing the number of deaths from poliomyelitis, per 100,000 of population, in 1949.

If for the purpose of this discussion we assumed that all age groups during an epidemic at some time or other are equally exposed to infection, then we would expect that the total number of cases of poliomyelitis would vary with the age of the population at risk, and that the ratio of non-paralytic to paralytic poliomyelitis would be constant in so far as invasion of the central nervous system by the virus was concerned.

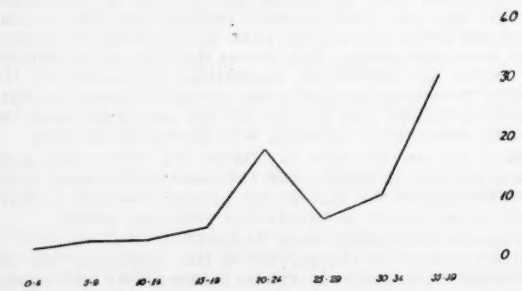

FIGURE VI.

Percentage of deaths from poliomyelitis, in age groups, in 1949.

When we plot these hypothetical curves and the actual curve for reported poliomyelitis, we find that in the twenty to twenty-four years age group the number of cases reported approximates most closely to the theoretical number of total cases and departs most from the theoretical paralytic cases. In other words, we can conclude that if the circumstances set out above hold, then the factor or factors which determine paralytic as opposed to non-paralytic poliomyelitis act maximally at this age.

The fact that the mortality rate per 100,000 of population is maximal in this age group also confirms this hypothesis. Thus, theoretically at least the operation of some such factor in this age group could explain the high preponderance of deaths per 100,000 of population in this group. Although in actual practice we know that other factors, including barriers to infection, prevalence of virus in the district *et cetera*, do modify the picture considerably, nevertheless one should not dismiss summarily the possibility that factors which alter the relation between paralytic and non-paralytic poliomyelitis are capable of explaining the high mortality rate in the twenty to twenty-four years age group and in males compared with females.

The fact that the mortality rate varies with incidence is also capable of explanation along those lines, if we remember that incidence varies inversely with age, and that it is in the higher age groups that paralysis in the reported cases is maximal.

Another explanation to be considered is based on the hypothesis, which is often stated as a fact, that deferring of infection till a later age is accompanied by a more pronounced neurotropism of the virus; it may be that artificial barriers to infection, by deferring the age at which poliomyelitis is contracted, cause those who subsequently develop the disease to develop a more extensive and more severe paralysis than those developing it at an earlier age. However, what little work has been done would tend to discount this hypothesis, and in fact there appears to be very little evidence for it.

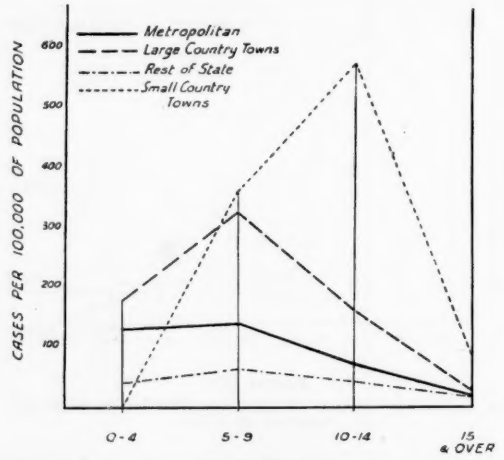

FIGURE VII.

Poliomyelitis. Graph showing age distribution in 1949 in certain areas.

Another theory to be considered is based on the possibility that there have been several strains of virus operating in this present outbreak, and that some are associated with a higher morbidity than others. Also it is possible that the age distribution of the patients affected by different strains may be different. The two peaks in the metropolitan incidence, and the fact that the nature of the present epidemic appeared to change in July, would lend some support to this hypothesis. Also there have been a few suggestive links between fatal cases. However, laboratory tests alone can determine the truth or otherwise of this hypothesis.

Conclusion.

In conclusion I refer to a graph (Figure VII) which illustrates that with dispersal of population there is a shift in the age distribution towards a higher age grouping. This change in age distribution with dispersal of population can be explained in either of two ways: (i) that the innate immunity of the population is less in the isolated areas; (ii) that there are more barriers to infection in the remoter areas. If the second of these statements is true, then the first also must logically follow.

Evidence that the first statement is true comes from the observation that not only is there a change in age distribution with dispersal of population, but also that the actual attack rate in the infected area is much higher when that area contains a dispersed population.

This, considered in conjunction with the fact that the actual incidence in cases per 100,000 of population is much less for all the country districts than for the metropolitan area, means that in an epidemic many country areas do not have the infection introduced into them, but when they do then one finds that they are affected rather badly and have a higher age distribution of their cases compared with that in the metropolis.

This observation does not lend support to those who postulate the universal prevalence of the poliomyelitis virus or viruses in the unsewered areas of this State.

POLIOMYELITIS—HOSPITAL MANAGEMENT.[1]

By H. McLORINAN,
Medical Superintendent, Fairfield Hospital, Melbourne.

A POLIOMYELITIS epidemic strains the resources of a fever hospital, demanding increased nursing staff, sufficient respirators to cope with all requirements, and an adequate physiotherapy service. In addition by cooperation with organizations interested in after-care, the fever hospital authorities must ensure that the machinery for the prompt discharge of patients is working smoothly.

An important factor in facilitating the work of the fever hospital is a reasonably good standard of diagnosis by general practitioners and general hospitals. I hope I shall be forgiven when I say that in general this standard is rather poor at the start of an epidemic. I know diagnosis is not easy, and I appreciate the difficulties of coping with anxious patients and relatives, many of them hysterical and all with a very real fear and dread of poliomyelitis. In this regard I would question the wisdom of advertising the symptoms of poliomyelitis in the lay Press and on the radio, and I would imagine that the difficulties of the general practitioner might thus be increased. However, the standard of diagnosis improves rapidly as the epidemic progresses. This is due to several factors; but I am sure that a potent cause is the educational value of the panel of diagnostic consultants. This is a unique service and is a wonderful help to the hospital, to the patient and to the general practitioner.

The itinerant physiotherapy service conducted by the Children's Hospital enables many children to be discharged promptly to their homes on the completion of the quarantine period. The immense value of this service in freeing the hard-pressed fever hospital beds can be imagined.

In the time at my disposal I will attempt to describe the hospital management of only two types of poliomyelitis—firstly the bulbar type, and secondly the type characterized by spinal respiratory paralysis and requiring respirator treatment.

BULBAR POLIOMYELITIS.

Bulbar poliomyelitis is a disease dangerous to life, but if the dangerous period, which is often of short duration, is successfully negotiated, spectacular and complete recovery may occur. For this reason early diagnosis and admission to hospital are more important than in any other form of poliomyelitis.

In bulbar poliomyelitis there are four clinical groups, the main features of which are as follows: (i) those indicating involvement of one or more of the cranial nerves; (ii) those indicating disturbance of central control of respiration; (iii) those indicating disturbance of central vasomotor control; (iv) symptoms of mental confusion and irritability indicating an encephalitic lesion.

[1] Part of a symposium on poliomyelitis, read at a meeting of the Victorian Branch of the British Medical Association on November 16, 1949.

Diagnosis of Bulbar Poliomyelitis.

The preparalytic symptoms of bulbar poliomyelitis are in general the same as in other forms of poliomyelitis. Headache, pain and stiffness in the back of the neck and the back are, as always, the mainstays of the diagnosis. Occasionally, however, in bulbar poliomyelitis the neck is "floppy" or paralysed, in which case stiffness cannot be elicited.

Symptoms Indicating Cranial Nerve Lesions.

The cranial nerve group is the commonest and most easily recognized form of bulbar poliomyelitis. The lesions most frequently seen are facial, palatal, pharyngeal and laryngeal paralysis. Facial paralysis is often present as a single symptom in mild cases. Palatal, pharyngeal and laryngeal paralysis, however, may produce dangerous symptoms of respiratory obstruction in the following manner: (i) by pooling of respiratory secretion in the pharynx due to inability to swallow; (ii) by accumulation of secretion in the larynx and trachea, owing partly to a weak cough and partly to the inhalation of the pooled mucus in the pharynx; (iii) by laryngeal spasm, which may be reflex or due to spasm of the adductor muscles.

It is rather extraordinary how often the difficulty in swallowing is missed as an initial symptom. It is commonly mistaken by the relatives as a disinclination for food. On inspection of the throat, frothy mucopurulent secretion is seen filling the pharynx and often prevents a clear view of the fauces. The frothy nature of this material is particularly characteristic. The pharyngeal cough is also distinctive. It is ineffective, because it lacks that initial closure of the glottis which in a normal cough builds up the necessary pressure which, when suddenly released, gives the impetus to expel secretions. The character of the breathing may vary. It is usually wheezy or even "bubbly", but laryngeal stridor may be produced if laryngeal spasm is present.

It will be obvious that the main effect is the production of respiratory obstruction which, if not relieved, will soon cause anoxia. It is logical to consider that the persistence of anoxia will have a deleterious effect on nerve cells perhaps already damaged by the virus, and on this assumption the urgency of the treatment is based.

Treatment of the Cranial Nerve Group.

Our immediate treatment, therefore, should be directed towards the relief of anoxia as soon as possible. In other words, we must ensure an efficient and adequate airway. Four methods are used: (i) postural drainage, (ii) suction or aspiration, (iii) tracheotomy, (iv) oxygen administration.

Postural Drainage.—Efficient postural drainage will be sufficient in many cases of simple pharyngeal paralysis. The foot of the bed should be raised to an extreme angle, as high as the patient will tolerate. Turning the patient on the face will also help. Unfortunately many adults, particularly those with associated diaphragmatic paralysis, will not tolerate this method for long.

Suction or Aspiration of the Pharynx.—Suction of the pharynx to remove the pool of mucus as rapidly as it accumulates is an essential form of treatment. It should be carried out by a rubber catheter and as gently and infrequently as possible, otherwise a fair amount of trauma can be produced. Moreover, repeated suction disturbs the patient and may produce dangerous vomiting.

Tracheotomy.—When a patient with pharyngeal and laryngeal paralysis is showing obvious signs of respiratory obstruction in spite of suction and postural drainage tracheotomy should be performed. It provides a method for short-circuiting the pool of mucus in the pharynx, facilitates suction and removal of the mucus already collected in the larynx and trachea, and prevents further inhalation, even though the patient may be placed in a respirator. Furthermore, nursing is made easier. The constant vigilance which is necessary when a patient is liable to choke with his respiratory secretions may be slightly relaxed once tracheotomy has been performed. Also the dangers of nasal feeding and the possibly

disastrous effects of inhaled vomitus are considerably reduced. Tracheotomy in suitable cases will produce dramatic results and has been an advance in the treatment of these cases. In the present epidemic we have had some spectacular "saves" and some disappointments.

Oxygen Administration.—Oxygen therapy plays an important part in the treatment of these patients.

Symptoms Indicating Disturbance of Central Respiratory and Vasomotor Control.

The clinical diagnosis of disturbances of central respiratory and vasomotor control is beset with difficulties. Rapid, irregular and shallow breathing alternating with deep, sighing respirations are accepted as the criteria for the diagnosis of central respiratory failure. The condition is extremely grave, and owing to its rarity methods of treatment are difficult to evaluate. Central vasomotor failure is indicated by sudden erratic changes in the pulse rate; again the prognosis is grave.

TABLE I.
Poliomyelitis: Classification into Types.

Type.	Cases.	Deaths.
Spinal	247	13 (5·26%)
Bulbar (pure)	47	5 (10·6%)
Bulbo-spinal	28	7 (25·0%)
Encephalitic	7	2 (28·0%)
Non-paralytic	71	—
Total	400	27

TABLE II.
Poliomyelitis: Classification into Age Groups.

Age Groups.	Males.		Females.	
	Patients.	Deaths.	Patients.	Deaths.
Under 5 years	77	4	51	—
5 to 9 years	73	1	37	—
10 to 14 years	34	1	10	—
15 to 19 years	25	5	10	1
20 years and over ..	39	10	44	5
Total	248	21	152	6

Symptoms Indicating Encephalitis.

Symptoms of mental confusion, irritability, and even coma indicate poliomyelitic encephalitis. These cases are rare, however, and care must be taken before the diagnosis is made to exclude the possibility of tuberculous meningitis.

Recognition and Management of Spinal Respiratory Paralysis.

Paralysis of the intercostal muscles and diaphragm occurs in the spinal type of poliomyelitis and not in the purely bulbar type. These muscles are innervated from the spinal cord and are not involved when the brain stem only is affected. These cases are usually severe from the onset and the condition is particularly dangerous in adults. At Fairfield we have a very real dread of adults who are admitted to hospital with early paralysis of the arms. One of the tragedies of this type of poliomyelitis is our complete inability to prevent further extension of the paralysis. In this epidemic it has been most depressing to watch healthy adults steadily becoming increasingly paralysed until finally the intercostal muscles and diaphragm are involved and treatment in a respirator becomes necessary. Adults treated in respirators do not do so well as children, and as the majority of respirator patients in this epidemic have been adults the mortality rate has been high. Complications of pulmonary œdema, extensive collapse and bronchopneumonia are found *post mortem*.

Comment.

Before concluding I should like to present two tables dealing with some aspects of the present Melbourne epidemic (Tables I and II). As I have said, the main feature of the epidemic has been the number of adults developing respiratory paralysis. The high mortality rate in the group aged over twenty years is shown in Table II. As I have said, the results are depressing. Moreover, this table does not reveal what is even worse and is very evident at Fairfield—the extensive paralysis still present in many of the adults who have survived. In contrast, most children have been comparatively mildly affected. An interesting feature is the preponderance of males in each age group except that over twenty years. In this group, out of 44 females no fewer than 13 were in various stages of pregnancy.

Conclusion.

To conclude, I would like to focus your attention on the 71 patients who developed non-paralytic poliomyelitis. From the point of view of epidemiology I feel that these are most interesting. Why have these patients been lucky enough to escape paralysis? They have had all the symptoms of poliomyelitis, have had invasion of the central nervous system, and yet have not developed paralysis. Immunity is obviously not a complete answer, because these patients have actually developed poliomyelitis. What is the factor, then, that decides whether the poliomyelitis patient who has signs of invasion of the central nervous system is going to develop paralysis or not? I am certain that there is a factor or factors, in addition to immunity, rendering the nerve cells more susceptible to the virus. It is possible that the work of Dr. B. L. McCloskey in this epidemic, showing an apparent influence of pertussis immunization, may be a pointer. We are slowly collecting a number of factors predisposing to paralytic poliomyelitis. We already suspect tonsillectomy, certain injections, extreme muscle fatigue and, lastly, pregnancy. What have these in common? Is it just simple trauma which in some way insults the fragile nerve cells? I feel that the general practitioner by continued clinical observation of patients and contacts of paralytic poliomyelitis may help to find an answer.

THE AFTER-CARE OF POLIOMYELITIS.[1]

By JEAN MACNAMARA,
Melbourne.

IN 1925 it was my privilege to learn from Dr. A. Jeffreys Wood and Dr. Richard Stawell the clinical picture of poliomyelitis as they had seen it in Victoria in the epidemics of 1908, 1911 and 1914, and later to hear their comments on patients paralysed in 1927 and 1928. These excellent clinical observers described poliomyelitis of the earlier epidemics as a disease affecting mainly infants and young children—a disease with insignificant pre-paralytic symptoms, in which the initial paralysis tended to be localized and often complete and permanent. In 1925, a few instances of this type were seen, but they have been infrequent in the ten epidemics which have occurred in Victoria since that date, except in one age group—the youngest patients.

The localization and severity of paralysis in the limbs of toddlers whose paralysis has developed at a short interval after prophylactic injections reminds me of the earlier type. Those of us who are responsible for after-care have reason to be grateful for the painstaking work

[1] Part of a symposium on poliomyelitis, read at a meeting of the Victorian Branch of the British Medical Association on November 16, 1949.

of Dr. Bertram McCloskey in investigating fully the sequence of this group of cases. His work has resulted in the warning issued that, in times of epidemic of poliomyelitis, immunization, particularly against pertussis, should be postponed. We are grateful for the prospect that, in the future, the number of young children paralysed will be reduced as a result of Dr. McCloskey's contribution to our knowledge of this disease. We are grateful, for the care of a baby with a paralysed limb, upper or lower, is much more difficult than is the care of an adult whose growth is complete, whose bony skeleton is formed and

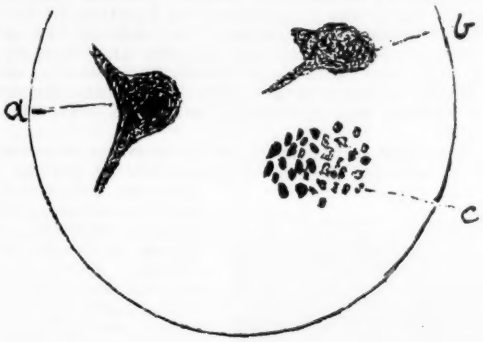

FIGURE I.

In a high-power photomicrograph of a section of the anterior horn destruction of neurons is patchy. In this diagram note (a) = intact neuron staining well with persisting nucleus; (b) = neuron with no discernible nucleus; (c) = damaged neuron invaded by neuronophagocytic cells.

who has had the chance to grow up straight without asymmetrical pulls.

Study of the microscopic pathology of poliomyelitis demonstrates that some neurons survive in areas of the cord severely affected. In Figure I three neighbouring cells have been selected from a photograph of a high-power view of the anterior horn. One neuron of normal appearance appears in the same field as the outline of a cell invaded by neuronophagic cells. In Figure II three

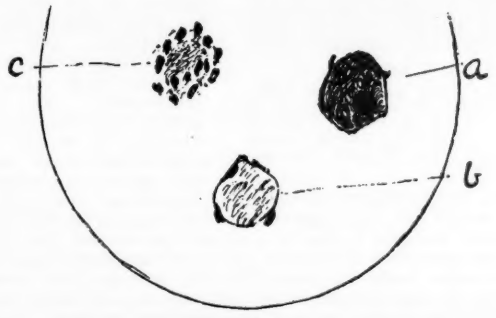

FIGURE II.

Similar changes are seen in a high-power photomicrograph of the posterior root ganglion. In this diagram note (a) = intact ganglion cell; (b) = ganglion cell staining poorly; (c) = "ghost" of ganglion cell undergoing neuronophagocytosis.

neurons have been selected from a photograph of a high-power view of a section of the posterior root ganglion in experimental poliomyelitis. The photograph demonstrated (i) the survival of a number of nerve cells in an area of the cord severely affected, and (ii) the extent of destruction of sensory cells which occurs in a disease in which loss of sensation is not a sequela.

The alteration within thirty years of the type of paralysis from that localized and complete in certain muscle groups to a more diffuse and partial paralysis brings with it heavier responsibilities for the provision of after-care.

When the lesions of the disease were of the earlier type, localized and severe—the little child with one dead limb—after-care measures could do little to help recovery

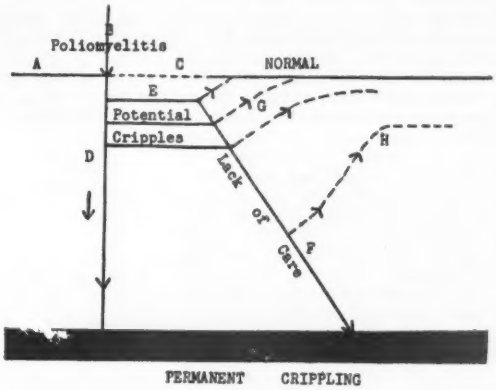

FIGURE III.

Diagram to demonstrate the fate of survivors of poliomyelitis: A, normal health; B, poliomyelitis; C, non-paralytic cases—normality restored quickly; D, minority of patients in whom lesions are responsible for permanent crippling; E, majority are potential cripples only; F, factory for manufacture of actual cripples—deformity, fatigue, lack of care; G, prompt efficient after-care guides to complete recovery; H, after-care commenced late can rescue many from the "crippling factory".

of lost power. In the type occurring at present, in which many cells survive, the muscles supplied by the cells need care, and, if the percentage of surviving cells is high, they may be sufficient, given time, to afford complete recovery of power. We are generously supplied with

FIGURE IV.

Muscles proximal to trunk are more valuable in lower limbs, less valuable in upper limbs.

neuro-muscular units. Few ordinary people call fully on the reserve supply by using muscles to capacity.

It is true that many patients affected this year have some muscles severely affected, all of whose neurons may have suffered destruction. Usually, however, in such patients, some muscles of the trunk or of other limbs are involved to a less severe degree and retain the capacity to recover if given the opportunity. Usually it is the muscles of the limb first affected which recover more

slowly and which show residual paralysis. The muscles of the trunk or of other limbs which became paralysed after the patient had been forced to bed recover first. In persons who have been protected from muscular activity during the pre-paralytic stage, the paralysis may be partial in all muscles involved and complete recovery may be possible.

I would stress the importance of muscular activity during the pre-paralytic stage as a factor in determining whether paralysis of any muscle is partial or complete. So much of the literature of poliomyelitis is devoted to hypothesis, not fact, that it is refreshing to have one proven fact—one thing we know, proven by statistics, by

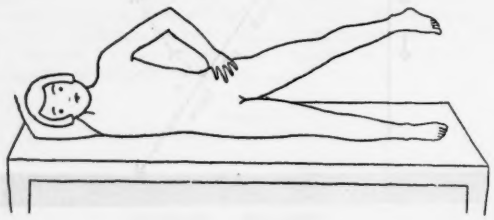

FIGURE V.
Position for testing power of the left hip abductors against gravity.

experimental work, backed by years of clinical observations. For example, in 1931 we sent to the Rockefeller Institute from Melbourne portions of spinal cords of monkeys paralysed after inoculation with portions of the cords of patients who had died of poliomyelitis. When I arrived at the institute in 1932 I was told that the inoculations of this material had not been effective in inducing paralysis in inoculated monkeys in New York. Some of the sample had not been used. Other monkeys were available. Several monkeys were inoculated with the same dose as that which had previously been ineffective. I had time to ensure that the monkeys had strenuous exercise twice daily around their roomy cages during the incubation period. They developed severe paralysis. Levinson and his coworkers (1945) in Chicago have demonstrated this more clearly by inoculating monkeys with a strain of virus in a dose which occasionally was followed by mild paralysis. Exercise by swimming or chilling during the incubation period induced severe paralysis in these monkeys.

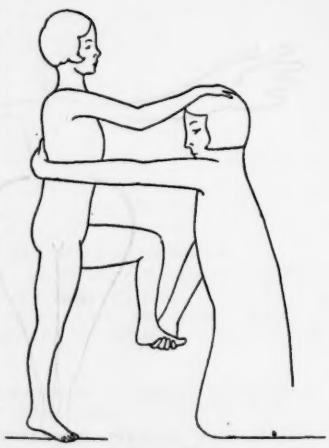

FIGURE VI.
Position for detection of calf weakness soon after onset.

Although this question of fatigue and muscular activity in the pre-paralytic stages does not strictly come within my subject tonight, I have stressed its importance for two reasons: (i) because I believe that if we could help the public really to appreciate the importance of avoiding muscular effort during indefinite illness in times of epidemic, our problems of after-care would be much simpler; (ii) because this factor "fatigue of muscle" is also responsible, after the virus has done its worst, for a major part of the crippling following poliomyelitis. Figure III may make this clear.

Certain people in normal health develop poliomyelitis. Some escape without paralysis—the "non-paralytic cases". In a minority of survivors (10% to 15%) the severity of the lesions in combination with exertion is such that the resultant crippling may fairly be attributed to the disease. However, the majority of persons affected are left, when the virus has done its worst, as potential cripples only. Factors operating after paralysis manufacture actual cripples from these potential cripples. These factors are stretching of paralysed muscles, use beyond the fatigue point (especially weight-bearing), and the development of deformities—all unnecessary factors. I would remind you that it is the group of patients with paralysis of mild or moderate degree who, uncared for, develop the worst deformities. Prompt provision of good after-care, on the other hand, can guide many to complete recovery, and it is possible to rescue and restore to economic usefulness many patients who have spent months on the "crippling factory".

In the older text-books of orthopædics are illustrations of the quadruped method of progression of persons who have had poliomyelitis—persons whose valuable buttock muscles were denied a chance of recovery. In those days patients were propped up with pillows and allowed to sit, and the hip extensor muscles had the insult of stretching added to their initial paralysis, while the hip flexors were favoured. The deformities which ensued were due not to poliomyelitis *per se*, but to the lack of care after the disease poliomyelitis had ended.

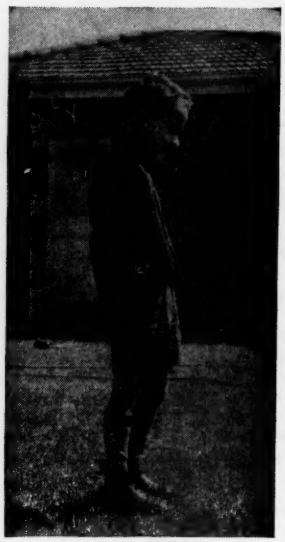

FIGURE VII.
Boy eight weeks after poliomyelitis. Note that posture is poor, and that more weight is taken through the right lower limb than through the left.

Sir Colin MacKenzie (1918) emphasized the importance of the antigravity muscles — buttock, quadriceps, calf and abdominal muscles—to a genus which challenges gravity as does man in the high ratio between his height and his "wheel base", compared with the low ratio of quadrupeds. As our patients have to fit into a society of bipeds, not quadrupeds, these valuable antigravity muscles must be protected from insults of stretching. Our concern to ensure the first opportunity for recovery to the antigravity muscles is one reason for the use of the frame in the after-care of patients from the Children's Hospital; the frame holds the patient in the position of a human being of good posture while his activity is rationed—kept within the fatigue point of the paralysed muscles.

The relative economic importance of muscles determines which shall have the first priority of care. In Figure IV is a reminder that the muscles of greatest economic importance in the upper limb are distal to the trunk, in the lower limb, proximal to the trunk. It is of little avail, therefore, to cherish a paralysed deltoid and at the same time to neglect the valuable muscles of the hands; or to care for a paralysed *tibialis anterior* if the much more important paralysed hip extensor muscles are insulted by allowing the patient to sit. One muscle group merits special attention—the abductors of the hips. It is important that even minor degrees of weakness of hip abduction should be recognized, for if the patient is allowed weight-bearing before the hip abductors have recovered, he develops a limp with a lurch to one side, as in a dislocated hip. This disability increases with weight-bearing as the

weakened hip abductors tire. He may walk well after a night's rest, but the lurch increases as the day goes on. Recognize this weakness early and save your patient an unnecessary disability.

The position for testing the power of the hip abductors against gravity is shown in Figure V, when the patient is examined in bed. If the patient is standing and lifts one foot from the floor, weakness of the hip abductors of the other lower limb will result in a shunt of the trunk to the same side. Recovery of these valuable muscles is hastened by splinting in wide abduction and forbidding weight-bearing until the muscles can act against gravity and strong resistance.

I would plead also for more interest in the muscles involved in rising on tip-toe—the calf muscles. Recovery of these muscles is important for those patients whose quadriceps has been paralysed, for, given normal calf and normal buttock muscles, patients with a weak quadriceps can often walk well without an appliance on level surfaces, though they encounter difficulty in rising up steps.

The early detection of even minor degrees of calf weakness is important as long as this disease attacks in childhood and youth, for complete recovery of the calf muscles represents sport, speed and endurance in weight-bearing as well as freedom from chilblains over the dorsal surface of the leg.

Watch any athlete or ballet dancer and study the demands asked by some humans of the muscles of the calf. Give your so-called "mild case" of poliomyelitis the opportunity later of sharing in sport by achieving a complete recovery. If minor degrees of weakness and endurance are recognized early, and if weight-bearing is forbidden and splinting is efficient, many weakened calf muscles will achieve a perfect recovery. In the detection of calf weakness before the patient is ready for severe tests the position shown in Figure VI is useful.

The examiner can quickly determine any difference in the weight transmitted through the examiner's head when the patient tries to support his whole weight on tip-toe, first on one lower limb, then on the other.

FIGURE VIII.

Standing on one leg. Uneven weight-bearing induces scoliosis if position is habitually assumed.

As each epidemic of poliomyelitis subsides, the second wave of patients needing care commences—persons the onset of whose disease was disregarded and those known to have had poliomyelitis, too hastily assumed to be non-paralytic. This second wave is rolling in now.

It is impossible to say how frequently non-paralytic cases occur. The figures quoted for incidence of non-paralytic poliomyelitis are higher in communities where the examination in hospital is the only test, than those found in centres where careful muscle examinations are carried out at regular intervals as part of a follow-up service. My impression is that true non-paralytic poliomyelitis is not common. Figure VII reproduces a photograph of such a child. His initial illness was diagnosed as poliomyelitis. He was allowed up without restriction. His people became worried when they observed that while no limp was evident early in the day it was obvious after activity had continued. They observed that he would stand with more weight on one lower limb, saving the other. He had been a good runner before his illness. Afterwards he would give up the attempt to run after ten yards, and as the weeks went by he would make no attempt at running at all. His calf muscles on the left were strong enough to lift him on tip-toe, but not strong enough to maintain him there as long as on the other limb. His hop on the left lower limb was heavier than on the right, and when he attempted the more difficult hops—bunny and kangaroo—it was obvious that the left heel was kept nearer the ground than the right. The uneven distribution of weight on the two lower limbs was resulting in scoliosis (Figure VIII). This type of scoliosis results when, for any reason, a rapidly growing child habitually stands with most of his weight transmitted through one lower limb—in Figure VIII the left—while the other limb is saved by some flexion of the knee and hip. The chest shunts to the right of the pelvis.

FIGURE IX.

To detect shunt of chest to right or left of pelvis, compare "windows" between trunk and pendant upper limbs.

The diagram shown in Figure IX, evolved by Miss Vera Carter, has been useful in teaching students to detect a "shunt" of the chest to one side of the pelvis, the "windows" between trunk and pendant upper limb losing their symmetry. The lad shown in Figure VII had, from his poliomyelitis, slight weakness of the muscles of the left calf. After exertion this inequality in power of the lower limbs was sufficient to induce the habit of standing unevenly—the first step in the development of scoliosis (Figure IX). He will not develop this unnecessary deformity, for, in a frame, with activity rationed, the affected muscles are now being given the opportunity to recover. In three or four months' time he will be able to stand without any temptation to protect his left lower limb. Each severe scoliosis has at one stage been mild scoliosis.

Figure X shows gross scoliosis in a neglected patient. It is due to two factors: (i) seven years of standing unevenly—a deforming "position habitually assumed"; (ii) asymmetrical weakness of abdominal muscles.

FIGURE X.

Scoliosis following poliomyelitis, largely due to secondary factors (position habitually assumed).

In older text-books are shown illustrations of gross scoliosis in the cervical and upper dorsal regions, and severe paralysis of abdominal muscles inducing scoliosis. But it must be remembered that minor degrees of weakness of abdominal muscles are equally effective in producing severe scoliosis if care is not taken to prevent this deformity.

In 1867 Charles Fayette Taylor laid it down that the deformities ordinarily attending infantile paralysis were entirely preventible. The years have taught me that scoliosis is the most difficult deformity to prevent, for it commences within a few days of the onset of paralysis. A baby with a lower limb severely paralysed, as soon as he feels well, exercises his good limb and thus hitches up the pelvis on the unaffected side and commences the manufacture of scoliosis.

The young doctor caring for patients with poliomyelitis for the first time is apt to fix his attention on the paralysed

limb. He will learn that it is the unaffected lower limb in a baby which requires the most careful splinting if the child is to be saved the added handicaps of a pelvic tilt and scoliosis resultant therefrom. In the same way, to allow a child, when erect, to use his weakened upper limb before the deltoid can act strongly against gravity is a potent method of inducing scoliosis. The child uses the lateral abdominal muscles of the opposite side to achieve the objective his weakened shoulder muscles cannot undertake.

In the attempt to control the tendency to a pelvic hitch and to anticipate the cervical and high dorsal curves which follow asymmetrical involvement of the cervical muscles, we have found the "papoose" splint useful. This splint was devised in 1930, but its principles have been

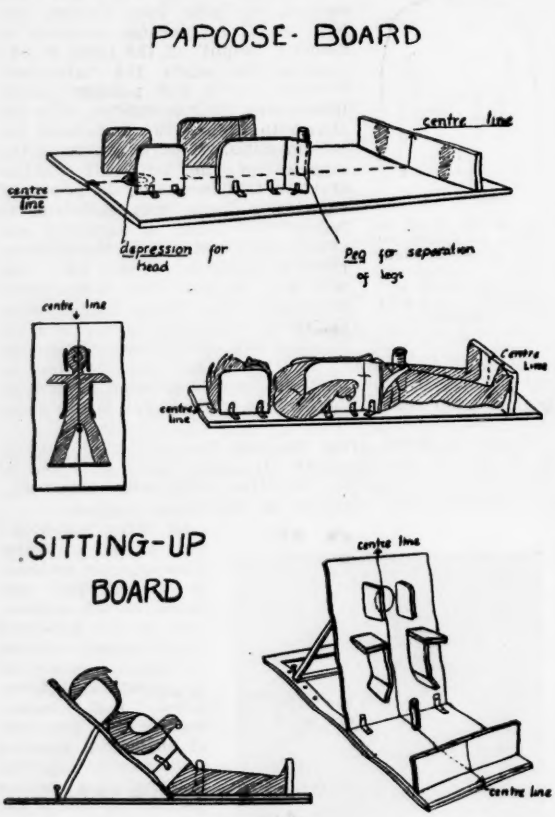

FIGURE XI.
Papoose board prevents scoliosis.

known to the Red Indian of North America for centuries. Being made of wood, and easily adjusted for growth, it is useful for little children, but too heavy for older children. To overcome this difficulty help has been sought from the Chief Superintendent of the Aeronautical Research Laboratories of the Department of Supply and Development, Melbourne—Mr. L. P. Coombes, D.F.C., B.Sc. (Engineering).

Mr. Bruce Foster, B.C.E., D.I.C., the officer in charge of applied research at the laboratories, after many months of work has devised the Foster frames of dural tubing. These frames are being mass-produced in two sizes, which, being adaptable, cover the range of sizes required from five years old to adults. We hope that when the Foster frames are available for use within a few days of the onset of paralysis it will be possible to ensure that no hitching of the pelvis, or torticollis, or shunt of the chest to the right or left of the pelvis will develop, and that, in the prevention of scoliosis, Victoria will measure up to the standards of Charles Fayette Taylor (Figure XI).

I would urge that every patient who has had poliomyelitis this year and who is not receiving after-care because recovery was regarded as complete should be reexamined at intervals of one month, three months, six months and one year from the onset, to determine that power in the lower limbs is equal; that weight is taken evenly; that no scoliosis, torticollis or claw-foot or winging of a scapula is occurring; that he can run and walk without a limp and walk on heels; that he can rise on one leg at a time from a chair; that he can hop in the ordinary way on one foot, and carry out the bunny hop on two feet, and that his posture is good.

The solution of the after-care of poliomyelitis rests largely with the experienced physiotherapist who has become a technician in conservative orthopædics; who cares for both the weakened muscles and the posture of her patient as a careful gardener cares for his orchids and young saplings; who protects them from harmful factors; and who gives credit to Nature, not to herself, when she has steered her patient to complete recovery with good posture.

At the Lord Mayor's Camp for Country Children at Portsea last summer competitions were held in posture in movement and in work as well as standing and sitting posture. In the finals to select Miss Portsea and later Mr. Portsea, on two occasions children who had had poliomyelitis were finalists. The other children protested: "It isn't fair; he has had polio. He has been taught how to stand." He had been taught by a physiotherapist.

Victoria owes a debt of gratitude to the Committee of Management of the Children's Hospital, which since 1931 has maintained a staff of physiotherapists experienced in the after-care of poliomyelitis at the after-care units at Frankston and at Hampton, and in the itinerant physiotherapy service to children in their homes in the metropolis and at Yooralla Hospital School and at suburban centres.

Despite the shortage of physiotherapists this year, the facilities for domiciliary care of adults in Melbourne and for the care of country patients are better this year than ever before. For this advance I am grateful for the interest, drive and prompt decisions of the Minister of Health, the Honourable C. P. Gartside.

Acknowledgements.

I acknowledge with gratitude my indebtedness to Dr. Reginald Webster for the loan of slides and photographs demonstrating the microscopic pathology of poliomyelitis. The diagrams in Figures I and II have been prepared from two of nine photographs published by Dr. Webster in THE MEDICAL JOURNAL OF AUSTRALIA, September 1, 1928. I am indebted to the enthusiasm and skill of the late Dr. John Parry for the line drawings of Figures IV, V, VI and IX; to Miss Vera Carter for the ideas embodied in Figures IV and IX; to the Girl Guide Association of Victoria for Figure VIII; to Miss Joan Hardy for the photograph of the child in Figure X; and to Miss Valerie Irwin for the drawings shown in Figure XI.

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THE EGREGIOUS DR. BEANEY OF THE BEANEY SCHOLARSHIPS.

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MEDICAL STUDENTS at the University of Melbourne are very familiar with the name Beaney. There are two Beaney Scholarships—the Beaney Scholarship in Surgery and the Beaney Scholarship in Pathology. There is also a Beaney Prize in Anatomy and Surgery at the Edinburgh University, which was almost certainly founded by the same Dr. Beaney. In general, names that are attached to prizes and scholarships are very honoured ones. As Dr. Beaney was at one time senior surgeon to the Melbourne Hospital, it might be expected that his name would be one specially held in veneration; but this is not so. Students of the history of the Melbourne Hospital very decidedly do not hold his name in veneration. For instance, Russell (1948), the historian of the early surgeons on the Melbourne Hospital, does not mention his name in his recent article on the early surgeons of that hospital, although certainly in a previous article he had described one of his books (Russell, 1938). This neglect would at first seem somewhat surprising, as Beaney was the author of at least 18 books on medicine and surgery, all published in Melbourne. The list of books is as follows: (i) "Original Contributions to the Practice of Conservative Surgery", 1859; (ii) "Contributions to Practical Surgery, Pathological, Therapeutic and Operative", 1861; (iii) "Syphilis—its Nature and Diffusion", 1869; (iv) "Vaccination and its Dangers", 1875; (v) "Spermatorrhœa in its Physiological, Medical and Legal Aspects", 1870; (vi) "Constitutional Syphilis, being a Practical Illustration of the Disease in its Secondary and Tertiary Phases", 1872; third edition, 1883; (vii) "Opinions of the Press. Constitutional Syphilis; Being a Practical Illustration of the Disease in its Secondary and Tertiary Phases", no date (1872); (viii) "The Generative System and its Functions in Health and Disease", 1872; second edition, 1875; third edition, 1880; fourth edition, 1883; (ix) "Children and their Treatment in Health and Disease, Part I, Infancy", 1873; (x) "Doctors Differ: A Lecture Delivered at the Melbourne Athenæum", 1876; (xi) "The History and Progress of Surgery. An Address Delivered to the Medical Students of the Melbourne Hospital on the Occasion of the Presentation of the Prizes in the Class of Operative Surgery"; (xii) "Surgical Diagnosis—a Lecture Delivered to the Medical Students at the Melbourne Hospital at the Inauguration of the Second Session", 1877; second edition (with inserted portrait), 1877; (xiii) "Diseases of the Hip Joint", 1878; (xiv) "Clinical Lecture on Diseases of the Hip Joint delivered in the Theatre of the Melbourne Hospital", no date (about 1878); (xv) "An Address Introductory to the Clinical Investigation of Disease delivered at the Melbourne Hospital", no date (about 1888); (xvi) "Clinical Lecture on Aneurysm of the Innominate Artery delivered at the Melbourne Hospital", no date; (xvii) "Stricture of the Urethra—its Nature, Pathology, Symptoms, Causes, Consequences and Cure", no date; (xviii) "On Bony Ankylosis of the Joints and its Operative Treatment", no date; (xix) in the fourth edition of "The Generative System and its Functions in Health and Disease", a notice stated that the following book would be issued in parts illustrated by engravings in wood: "Twelve Years of Operative Surgery in Victoria".

If this list is incomplete the writer would be glad to know of additions. The writer has read several of these books. They are written in the first person singular, and thus give the impression of first-hand knowledge. They are dogmatic, highly readable and not a little boastful. Here is an extract from "Surgical Diagnosis":

> A gentleman requested me to examine his son, who was (He had been informed) suffering from paralysis, the result of an accident, and for which he had been galvanised. I examined the lad in the presence of another medical man, and that turned out to be a dislocation *unreduced!* About ten days ago a man entered my consulting-room, saying he was ruptured, and for which a medical man had applied a truss, which was causing him great pain. On inspection, it turned out to be a case of *hydrocele* of the *cord*, and there was no hernia. I saw another patient who complained of the truss hurting him; I examined him, and found a truss on an *inflamed bubo!* I have known dropsy of the knee joint (hydrarthrosis) treated as white swelling. A practitioner once asked me to take a woman into the Hospital and tie her femoral artery for a popliteal aneurism. I found, on examination, that it was a *cystic tumour* in the popliteal space, its slight pulsation being communicated by the artery *beneath* the tumour. I removed the tumour, and the patient recovered!

FIGURE I.

A contemporary caricature of Dr. Beaney. (From The Weekly Times, December 6, 1873.)

Even allowing for those parts which are particularly boastful, we should have thought that these books would have ensured for their author a lasting reputation in Melbourne. Why then have they not done so? The answer lies in the contents of three books other than those previously listed. The first of these is "The Queen *v.* Beaney: Extraordinary Charge of Murder Against a Medical Man. The Consequence of a Diseased Womb Being Ruptured after Death", by C. E. Reeves, B.A., M.D. (Melbourne): (W. B. Stephens, 1866). Associated with this book is another entitled "Dr. Beaney's Vindication: With Reflections on the Inquest Held Upon the Body of Mary Lewis 1866", which, however, the writer has not seen. There was a second edition in 1870. Two others are "Lithotomy", by an M.R.C.S.E., Melbourne (F. F. Bailliere, publisher, 1876), and "The Medical Embassy to England, being a Report of the Trial Bailliere *v.* Beaney" (Melbourne: Stilwell and Company, 1880). These three books will now be examined separately.

"The Queen *v.* Beaney" is an account of the two trials of Beaney for the murder of a young unmarried woman by the procuring of an abortion. The author of the book was C. E. Reeves, B.A., M.D., who was evidently a close friend of Beaney's and who prepared the medical part of Beaney's defence. The opening paragraph of the narrative is as follows:

> After two investigations, one before the coroner, the other before a bench of magistrates, and two trials unprecedented in length in these colonies, and characterised by a degree of malevolence and bloodthirstiness worthy of the days of Judge Jeffreys or Jonathan Wild, on the part of those engaged to prosecute the charge, and an amount of ignorance and pretension on the part of the medical witnesses (worthy of the days when witches were burnt) engaged to investigate it and to give evidence as experts that was disgraceful to themselves as men, and to the colleges of which they are members, Mr. Beaney has been acquitted of a charge of murder, which ought never to have been made, had the two medical men who made the postmortem examination, and the coroner, a medical man in practice, known anything of their profession.

The facts of the case are these:

A young woman, Mary Lewis, was barmaid at the Terminus Hotel, St. Kilda. She had had two children previously, the father being the proprietor of the hotel. On March 12, 1866, she consulted Beaney. She had previously consulted two other doctors. One of them, Dr. L. L. Smith, considered that she was three months pregnant. Up to the time when she consulted Beaney she was apparently in her normal health. Beaney examined her at his rooms in Collins Street on a Monday. On Tuesday he visited her at her lodgings in Rokeby Street and was closeted alone with her for about a quarter of an hour. On the Wednesday, when he again visited her, her condition had greatly deteriorated and she was seriously ill. Her face was cyanosed, there were sordes on her teeth, her breath was foul and her pulse was rapid. Beaney administered chloroform, he later explained, in order to give her a little sleep. On the Thursday she was *in extremis* and died during the afternoon. Beaney gave a certificate of death stating that she had died of "malignant disease of the uterus". He later explained that the word "malignant" was used in the same sense as in the phrase "malignant pustule". On the Friday Beaney received a message from the keeper of the lodging house saying that rumours were about to the effect that Mary Lewis had died as the result of an illegal operation and asking him to perform a post-mortem examination. Beaney said he would do so, but in the end he did not perform the examination. The rumours evidently reached the ears of the Coroner, Dr. Candler, and a post-mortem examination was performed by Dr. Rudall, who was then apparently pathologist to the Melbourne Hospital and who later became a well-known honorary surgeon. He was assisted by Dr. William Russ Pugh, who is remembered as having been the first person in Australia to administer ether. Rudall and Pugh discovered that the external genitals were very swollen and dark-coloured as the result of force. There was no distinct areola around the nipples but the breasts contained a milk-like fluid. The uterus was enlarged to the size of a five months' pregnancy and was plum-coloured. Two ruptures were found in the uterus, one at the fundus and one at its junction with the vagina. Rudall passed his hand from the vagina upwards and found the passage so dilated that his fingers could easily be protruded through the tear in the fundus. There was no blood in the abdominal cavity. There was reddish serum in each pleural cavity. The spleen was soft.

Dr. Beaney did not attend the post-mortem examination, but he was present on the following day when the womb which Dr. Rudall had cut away was being examined. The womb was later sent to Professor Halford, professor of anatomy and physiology at the University of Melbourne. A magisterial inquiry followed the inquest and at this Beaney was committed for trial on a charge of murder. Beaney, who had at first taken things rather easily, was by this time thoroughly alarmed. He had gathered his friends around him, and these, with Reeves at their head as organizer, became very active. The body was exhumed and reexamined. The specimen in Professor Halford's care was thoroughly scrutinized and measured. When the first trial finally came on it was found that Beaney had a strong defence. At the present time all doctors would agree that the girl had been pregnant and had died as the result of an illegal operation and blood-poisoning. The contention of Rudall and Pugh, however, was that she had died as the result of rupture of the uterus and shock. It was the defence who raised the possibility of blood-poisoning. It was argued that she was not pregnant at all, but that she was suffering from sub-involution of the womb as the result of her previous pregnancies, and that her womb was in a state of chronic disease which had at last turned to acute poisoning. The rupture, it was alleged, had resulted after death from Rudall's rough handling of a womb already far gone in decomposition. The defendant had one extraordinary stroke of luck. When the uterus was reexamined at the university it was found that the ovaries were missing, and moreover that they had been cut cleanly away. When Rudall was cross-examined on this point he stated that he attached no significance to their absence, as he had found the presence or absence of a *corpus luteum* to be most misleading. Professor Halford disagreed with him, however, and stated that if a *corpus luteum* had been absent it would have been strong evidence against pregnancy.

From the historical point of view it is worth recalling the names of some of the medical witnesses. For the prosecution there appeared, apart from Rudall, Pugh and Halford, Richard Thomas Tracy, lecturer in obstetrics at the University of Melbourne. For the defence there appeared: William Mackie Turnbull, honorary physician to the Melbourne Lying-in Hospital; William Crooke, formerly resident surgeon to His Majesty's General Hospital, Hobart Town; Cornelius Stewart; Thorp Mountain Girdlestone; Edward Garland Figg, sometime assistant to Sir James Simpson; William Gilbey, honorary surgeon to the Melbourne Hospital for thirteen years; William Haig; Henry Charles Curtis, honorary surgeon to the Melbourne Benevolent Asylum for four years; John Blair; and Charles Evans Reeves.

At the end of the first trial, which lasted eleven days, the jury disagreed.

There is no doubt that at this stage Beaney's position was extremely dangerous. Sadleir, in his "Recollections of a Victorian Police Officer", states that there was a rumour around Melbourne at this time that if Beaney was found guilty at the second trial he would be hanged.

The second trial commenced on June 18, 1866. The outstanding feature of the trial was the striking change in tactics adopted by Beaney's counsel, Aspinall. At the first trial a cloud of witnesses had been produced to contradict the evidence of the witnesses for the prosecution. Sadleir states that although Aspinall pretended to be preparing a similar barrage of contradictory evidence, he did not in the end call any witnesses at all for the defence. He relied on his own cross-examination and on a powerful address. His cross-examination must rank among the most brilliant in the history of the Victorian Bar. The main witness for the prosecution was, of course, Rudall. His evidence was damning. Aspinall, however, obtained from him the following admissions: (i) that he had not made midwifery his special study and had not attended midwifery cases for years; (ii) that he had added to his evidence of the first trial and had handed to the Crown Prosecutor a document showing how he wished the examination in chief to be carried out; (iii) that had he not found the rupture in the uterus he might have made a more thorough examination of the other organs; (iv) that he had estimated the size of the uterus and of the ruptures by eye and had not actually measured them; (v) that he did not think the examination of the ovaries to be essential; (vi) that the presence of milk in the breasts was no proof of pregnancy; (vii) that there was very little blood in the peritoneal cavity, as might have been expected had a rupture occurred during life.

The following is an example of how an alert barrister will seize upon a chance remark. Aspinal is cross-examining Rudall:

> Q. In the case of examining the belly, should you not have first examined everything *in situ*?
>
> A. You generally, when a body is opened, turn back the intestines, and you generally cast a glance at the parts.

Q. You can see sufficient at a glance?
A. I mean to say, that unless you saw some appearances to arrest your attention you would not make a long examination.
Q. When the reputation, and perhaps the life, of a brother professional man are at stake, is a cursory glance at the belly all you take?
A. No; it is not all. We give more than a glance. There are some things we see at a first glance as on a further examination.
Q. If anyone raised a prosecution against you, would you not require a careful examination?
A. Yes.

From Dr. Pugh, Aspinall obtained the striking opinion that after the womb had been ruptured the patient would have been incapable of any movement. The rupture was supposed to have taken place on the Wednesday afternoon when chloroform was administered, but it was proved that after this the patient had been up repeatedly to sit on the chamber-pot. From Professor Halford and from Dr. Tracy, Aspinall obtained strong opinions that the presence of the ovaries was essential. Aspinall's address to the jury was excellent and according to Dr. Reeves "was listened to with great attention by a crowded audience, and applause was attempted but the manifestation was instantly suppressed". The judge's summing-up was strongly in Beaney's favour. The jury retired at 3.20 p.m., but were out only ten minutes when they returned with a verdict of "not guilty".

The quotation already given from Reeves's account of the trial is a fair sample of his virulence and utter lack of dignity; but other samples may be given. The Crown witnesses are referred to as "Dr. Ketch's jackals". Of the Crown Solicitor he states:

> It was a pleasure to see the Crown Solicitor in court —a kind of walking description, "sans crinoline", of Messrs. Tracy and Pugh's illustration of what they wished to prove—parading up and down, hands in pocket; staring at the prisoner in the dock for five minutes with a kind of absent ox-like placidity, with just the slightest cannibalistic twinkle in the corner of his right eye, which seemed to say, "Got much fat 'bout 'im kidney? White fella meat berry good; me berry much like 'im juicy".

The mystery of the missing ovaries is referred to as follows:

> The question of "Who bagged the ovaries?" will come from every medical man in the world to Messrs. Rudall and Pugh. Have neither of these gentlemen a spectre, with blackened and swollen face and skull-cap wide open, to show how well he did his work in opening the head, sitting at his bed-head, or going arm-in-arm with him down the streets, gibing at him, and muttering into his ears, "Where are my ovaries?".

Taken as a whole this book is most damaging to Beaney's reputation.

"Lithotomy"—1876—by "M.R.C.S.E.".

It is thought that "M.R.C.S.E." was Beaney himself. There is exactly the same vituperative style about "Lithotomy" as that which characterized "The Queen *v.* Beaney". Again the main complaint is to the effect that Beaney was being victimized.

> It is a well-known fact that the older hospital establishments in London have been gradually converted, through a series of years, into close corporations, as far as the medical staff is concerned, and the retiring medical officers have been gradually replaced by younger men, either relatives or pupils, who have received their professional education in the hospital itself; so that in the event of any outside surgeon being chosen to fill the office, he was sure to be treated as an intruder—at all events, for some considerable time. Now, the Melbourne Hospital has gradually approximated under similar conditions to the same state as the London hospitals, and the medical officers, though only appointed originally for ten years, led themselves to believe they had a life interest in their appointments, and that they ought to be re-elected as a matter of course; also, that no outside surgeon or physician, unless a protégé of their own, should have the bad taste to oppose them on the expiry of their term of office.

In November, 1875, a young man named Robert Berth was sent from Amherst Hospital to Dr. Webb of Melbourne. Webb, who was later to become a full honorary surgeon to the Melbourne Hospital, was then only assistant surgeon and he referred the patient to Beaney. The patient was admitted to the Melbourne Hospital and operated upon by Beaney assisted by Webb. What took place is well described in an anonymous letter signed "A Practical Surgeon" which appeared in *The Argus* soon after the operation:

> The second or lithotomy case was put upon the table. The patient was a young and healthy man. Mr. Beaney stated to the students that as the stone was small he would perform the median operation; however, he attempted the rectal or Lloyd's method. After some considerable cutting he got into the bladder, but only to find that the stone was an unusually large one.
>
> Having failed, after strenuous efforts, to remove it, a bystander requested him to crush the stone. This advice, however, he would not take, as he stated he was most anxious to extract it whole. There were two other operations still open to him to save the patient's life, viz., the bilateral, or the supra-pubic. He did not avail himself of either, but continued pulling and pulling and bending the hospital instruments, endeavouring to extract the large stone through the small opening. By sheer force the much-prized lump was hauled out. The result of course is easy to imagine—the man died of peritonitis.
>
> Now, Sir, had Mr. Beaney taken the advice tendered to him, and crushed the stone, it is almost a certainty that the man would now be alive. A cast of the stone is on view at a bookseller's in Collins-street east as an advertisement for Mr. Beaney's great operative skill, but the poor man from whom this great specimen was extracted is in his grave. I wonder what reason Mr. Beaney will give the committee for not calling a consultation on these two cases. Perhaps they are exclusively his own operations, and that he feared his colleagues not understanding them might veto his chance of displaying such an amount of surgical skill.
>
> I am, etc.,
> December 18. A PRACTICAL SURGEON.

In consequence of the publication of this letter the Coroner, Dr. Youl, had inquiries made. The body was exhumed, a post-mortem examination was made, and finally an inquest was held. The post-mortem examination was performed by Dr. Barker and Dr. Neild. It is stated that both these men were "personally antagonistic to Beaney and could not be considered impartial witnesses". Certainly, at Beaney's first trial ten years previously, Barker had been very active in marshalling evidence against Beaney and in prompting the witnesses. He was honorary surgeon to the Melbourne Hospital from 1852 to 1875. Neild was the lecturer on medical jurisprudence and was described by "M.R.C.S.E." as being also "a literary and dramatic critic". As regards the perineum, Barker and Neild reported the following findings:

> All the parts from the triangular ligament to the wound in the bladder including the membranous urethra, the prostate-gland and the neck of the bladder were destroyed. There were still many fragments of stone in the bladder. There were signs of acute inflammation of both ureters and kidneys. The right kidney contained two small stones.

The cause of death was given as "shock from the injuries received at the operation, with consequent inflammation of the bladder, urethra, kidneys, and peritonitis".

Purves, the defending barrister, made great play with the two stones found in the kidney and with the inflammation of the kidneys. He put it to Neild that it was impossible to foretell what the condition of the kidneys would be before operation and quoted from *The Lancet* to the following effect:

> In the report of the postmortem examination of the body of the Emperor Napoleon, it is stated that "disease of the kidneys existed to a degree which was not suspected, and, if it had been suspected, could not have been ascertained". Commenting upon this, *The Times* says: "A man may still, it appears, die under the hands of the first doctors in the world of a great organic disease, without their knowing anything about it." Unfortunately we have to plead guilty to this charge,

but there is much that may be said in mitigation of sentence.

The practical surgeon only too well knows that, take what precautions he may, a certain proportion of all operations performed on the urinary organs, even, occasionally, the simplest of all, passing a catheter, will prove fatal from inflammation of the kidneys.

How to recognize beforehand which are the cases destined to such a termination has as yet baffled his skill. Even near the fatal termination it is not always easy to recognize the disease with certainty. The form of kidney found in such cases, from its occurring almost exclusively in surgical practice, is frequently known by the name of surgical kidney.

Purves's advocacy was successful and the jury found that Beaney had not been guilty of culpable negligence.

The following extracts from the book are worth quoting:

The Coroner states that he saw a case recorded of an American surgeon who met with the same difficulty, who removed the stone by the suprapubic operation, and the patient lived. As the Coroner gave neither name, date, nor any references, it may be doubted whether the patient ever existed, except in the imagination of the writer. Some tall cases are not infrequently met with in American sensational medical literature.

Here is Purves's cross-examination of Barker:

Q. You know what is called Lloyd's operation?
A. I have just said I was the first to do it in the colony. I did it more than 20 years ago.
Q. You have performed it yourself?
A. Several times.
Q. I suppose you have had a large experience as a surgeon?
A. I was eight years in a hospital at home before I came here, and I have been twenty-five years surgeon to the Melbourne Hospital.
Q. How many times have you performed the operation of lithotomy—the median operation?
A. I suppose I have performed it forty times at least.
Q. How many times have you performed the particular operation known as Lloyd's?
A. I dare say I have performed Lloyd's operation five-and-twenty times.
Q. Have you ever had the misfortune to lose a patient?
A. Yes.
Q. How long does it take you, as an experienced surgeon, to conduct the median operation from beginning to end?
A. I think it very long if I am three minutes.
Q. What?
A. You may look. I consider it very long if I am three minutes.
Q. Over the whole operation?
A. Over the whole operation.
Q. I thought you would take three minutes merely to crush the stone?
A. Three minutes is a long time for the whole operation.
Q. How long do you take to dilate the parts?
A. I don't take many seconds to dilate the parts.
Q. Then you would tear them roughly asunder?
A. I would not. I do not tear them at all.

At the end of the book there are a number of Press cuttings, all laudatory of Beaney. The following is from the *Sydney Evening News* of January 10, 1876:

For years Dr. Beaney has been the envied head of the surgical profession here; his income has touched £12,000 *per annum*; his diamonds, his generosity, his success, have been the talk of Victoria, and is it to be wondered at that less successful men could not see his skill or his merit? One advantage they had kept from him by mere chance. Ten years since there was a general election at the Melbourne Hospital, and Dr. Beaney lost his seat through over-security, Dr. Barker just managing to squeeze in above him. For ten years, then, he had to visit outside the envied door, and at this last general election they did their best to keep him out. But the public was too strong for this clique of detractors, and Dr. Beaney was returned by an immense majority, far away above all his competitors, his old antagonist, Dr. Barker, occupying a comfortably snug position at the bottom of the poll. Senior Honorary Surgeon of the Hospital at last, with an immense reputation, Dr. Beaney was a marked man. Every action watched, everything criticised by keenly malicious eyes, and his own resident surgeon seems to have not been entirely his friend. Sufficient to say, he met his old and new enemies in his usual bold, open, free-handed way; they might scheme, but he laughed at all; waited till the charge was brought by some anonymous scribbler, met it fairly, was acquitted freely, and returned with unruffled brow and cool steady hand to his houseful of patients, the only sign of annoyance to be found in him being a good-humoured laugh, and a sort of "Never mind, old boy; try a glass of champagne".

On Monday, January 24, 1876, a complimentary dinner was given to Beaney. The mayor presided and he was presented with a silver inkstand. In spite of the laudatory articles, the dinner and the silver inkstand, the general tone of "Lithotomy" is again damaging to Beaney's reputation.

"The Medical Embassy to England."

"The Medical Embassy to England" was published in 1880 by the Medical Society of Victoria.

The report of this trial is reprinted from *The Argus* with the permission of the Editor. The object of the re-publication is to give to those at a distance the means of satisfying themselves that the Medical Society of Victoria had good reason for the action taken by that body last year, in protesting against being represented in Europe by Mr. Beaney. This action was misunderstood by a great many persons, and the stale cry of "professional jealousy" was offered as the explanation of the indignant protest that was made against such a representative. It was well known to the Society by what means Mr. Beaney had obtained the credentials of which he made such a profitable use to himself, and how little reason there always had been to consider him a suitable person to speak for the medical profession; but it was not thus known to the public, and, therefore, the recent disclosures are so far satisfactory to the profession in this colony, that they enable us to place on record a justification of all the measures the Society was constrained to take during the absence of Mr. Beaney in England.

The pamphlet gives an account of the action brought by Bailliere against Beaney. In the year 1878 Beaney decided to visit England. Before he went he held a sale of his furniture *et cetera*. The sale was advertised widely, not only in the other colonies of Australia but even in New Zealand. A large crowd attended. The sale was a great success, taking three days to complete. Beaney took with him to England the following letter from Mr. Graham Berry, the Premier:

Victoria,
Chief Secretary's Office,
Melbourne, June 20, 1878.
No. 2,616.

Sir,—I have received your obliging letter offering during your absence from the colony to visit some of the chief public hospitals in Europe and the United States in an honorary capacity, with a view to collect information as to the most recent improvements introduced through the agency of modern science into the organisations and general management of those institutions, as well as others of a like nature.

I willingly avail myself of this proposal, and should be glad as soon as possible after your return to Melbourne if you would furnish the Government with a full report of such observations as you have been enabled to make, together with suggestions based thereon as to the best means for improving the efficiency of our local institutions where their management may appear to suffer by comparison with that pursued in other countries.

I have the honour to be, Sir,

Your most obedient servant,
GRAHAM BERRY,
Premier.

James George Beaney, Esq., F.R.C.S.,
Melbourne.

On the strength of this letter Beaney was royally received in the British Isles. Dinners were given in his honour and newspapers wrote articles praising him to the skies. The following is from the *Irish Times*.

Dr. Beaney bore with him the commission of the Hon. Graham Berry, empowering him to visit and inspect

> the hospitals of Europe with a view of introducing into the colony whatever surgical or sanitary improvements he might find worthy of adoption, and he had moreover letters from a number of Australian residents of the highest worth and the most assured position. With such credentials it is not to be wondered that Dr. Beaney was received with open arms by a number of the most eminent of the medical and surgical profession of Dublin and London, who were at first moved by his commanding introductions, but on nearer acquaintance found that he required no introduction beyond his own worth. . . .

The article proceeded to refer to "his personal character, his splendid attainments, his previous history, his official position, his unquestionable credentials" *et cetera*. On one occasion in England he was even referred to as the "Victorian Paget".

When Beaney returned to Victoria he was presented by his publisher Bailliere with an account for £400 and for certain other moneys having to do with the sale of books. He refused to pay. Bailliere thereupon took the matter into court. Even Beaney's enemies would hardly have expected the revelations that the trial brought forth. It turned out that Bailliere and Beaney had been close friends for many years. Bailliere was nothing more or less than Beaney's publicity agent. He thought up bright ideas for bringing Beaney before the public eye and carried these ideas into effect. It was his idea that Beaney's sale should be advertised so widely. It was his idea that Beaney should take to England with him a letter stating that he was the representative of the Government. It was over this last matter that he claimed the £400 from Beaney. Beaney, he stated, had promised him £400 if he could get such a letter. Beaney in his defence stated that he had promised the £400 only if Bailliere could have his appointment gazetted—"no gazette, no present". As Bailliere had failed to have the appointment gazetted he refused to give him anything. It next turned out that whilst in Britain Beaney had had printed copies made of the Premier's letter and that the words "in an honorary capacity" were transformed into "as an honorary commission". The letter was described as "an appointment to act on behalf of Her Majesty's Government of Victoria" and the words "On Her Majesty's Service" appeared at the top. It further appeared in regard to the article in the *Irish Times* that Beaney had given the manager of the paper a diamond ring.

The most striking revelation, however, was as follows —Bailliere is being examined:

> As to the first, he said he wanted a lecture to abuse the medical profession—such a lecture as could be circulated all over the colonies. I undertook to get one written to order. I did so, and got it printed afterwards on large folio paper, so that he could deliver it easily. He paid for the printing of it, the postage of it, and the writing of it. He delivered the lecture as his own. I engaged the hall, and obtained the assistance of Mr. T. P. Hill to give him lessons in elocution, so that he should deliver the lecture with proper emphasis. The rehearsal took place at the Melbourne Athenaeum. I was there. He spent about two hours pitching the voice. I stood at one end of the hall to ascertain how his voice could be heard. We tried everything in fact, to make it a big success. £20 was paid to the writer of the lecture. The lectures were simply for advertising —there is nominally a price on them. I charged £25 for the work I did. It is a reasonable price. As to the lecture on "The History and Progress of Surgery", Mr. Beaney informed me that a lecture had to be delivered at the Melbourne Hospital on the occasion of his presenting, in his capacity as senior surgeon and clinical lecturer, his gold medals to the students, and he asked me if I could arrange to get a lecture written for him; that Sir John O'Shanassy had promised to deliver the medals, and he (Mr. Beaney) wanted a firstclass lecture to be printed afterwards and distributed like the others. I got it written and printed. The lecture was delivered by Mr. Beaney, and paragraphs appeared about it. Mr. Beaney paid for the writing, printing, posting, and the paragraphs. The book was distributed in the usual way. The author was paid £20. I received nothing. I claim £25—which is reasonable. (Copies of the lectures put in.)

Of the book on lithotomy not a single copy was sold. It cost £700 to publish. "It was done as an advertisement. All the copies were distributed."

Bailliere stated that since 1872 he had made a profit of £3000 from Beaney, most of it for publishing Beaney's "works". Here is Purves cross-examining Bailliere:

> Witness.—Dr. Beaney was making money out of my intellect and brain.
> Mr. Purves.—You sold your intellect at so much a lb?
> Witness.—No, by the oz.
> Mr. Purves.—You ought to sell it by the ton—that is the way they sell wood.

Bailliere wound up his evidence with the following statement:

> Mr. Beaney once did perform an operation on me, unfortunately. He did not charge me. No medical man ever charges me. There were three other medical men present. It was the result of a bet. I had a tumour. Some of them said it was hard, some soft. I said that they might operate if the loser paid for champagne. So they got me down, and operated, and I was in bed for three months.

Bailliere lost his case, but he must have been well satisfied with the damage he had done Beaney. At the end of the pamphlet there are extracts from various newspapers, all condemnatory of Beaney. The following is from *The Argus* of May 28, 1880:

> It is not necessary to say much concerning the transactions between the plaintiff and the defendant. It appears that for many years they walked in the way of life as friends. They frequented each other's houses, and revelled in the graceful hospitality therein dispensed. But they were something more to each other than mere visiting acquaintances. Throughout the whole of their intercourse they appear to have had an eye to business. Beaney was possessed by an intense craving for fame, while Bailliere was afflicted by insatiable hunger for money; and doubtless the capacity for usefulness which each discovered in the other drew them together with a binding force far greater than any ever exerted by the mere attraction of kindred spirits. Beaney might have been blushing unseen and wasting his sweetness on the desert air at the present moment, had he not been brought into contact with the enterprising publisher, and Bailliere might have been poorer by several thousands of pounds, if he had not come across the ambitious surgeon. They suited each other to a nicety. The genius of Bailliere turned everything the doctor touched into an advertisement. Now it was a vamped-up book, now an auction sale of furniture, now a fraudulent lecture, and anon some other matter or device to which the medico was induced to put his name; but everything alike was made to serve the great end of puffing the "senior surgeon of the Melbourne Hospital" into notoriety. Bailliere went strictly on the principle that anything worth having is worth paying for. He was ready enough to find fame for his friend, but only for an adequate consideration. He considered that the labourer was worthy of his hire, and refused to work his "intellect and brains", or even to lift his little finger, without some return in the shape of what Mr. Gardiner calls "sugar". And so the happy and profitable years glided away. The name of "Beaney" —on free copies of bogus works—became known far and wide, while Bailliere waxed fat on commissions and publishers' charges, and "salted" accounts, and numerous other little "crumbs" which fell or were snapped from the rich man's table.

Conclusion.

The following is an extract from "The Dictionary of Australasian Biography", 1892, by Phillip Mennell:

> Beaney, Hon. James George, M.L.C., M.D., F.R.C.S.E., L.K.Q.C.P.I., M.R.I.A., was born at Canterbury, in Kent, where he was educated, and studied surgery with Mr. W. J. Cooper. He was afterwards a student at Edinburgh University, at Paris, and at Guy's Hospital. He commenced his medical career as regimental surgeon in the Mediterranean, and with the Turkish contingent in the Crimean War. After the campaign he made several trips to America, and ultimately went to Melbourne, where in 1858 he became assistant to Dr. John Maund, at whose death he succeeded to his practice. In 1860 he was appointed surgeon to the Melbourne Hospital, surgeon to the Royal Victorian Artillery, and

was elected a member of the Royal Society of Victoria. He was again elected surgeon to the Hospital and banquetted at the Town Hall in 1875, and was subsequently re-elected despite the strenuous opposition of a large section of the medical profession. In 1878 Dr. Beaney visited England with a semi-official commission from the Berry Government to report on medical matters. In 1883, after a severe contest, he was elected to the Legislative Council for the North Yarra Province, and was re-elected for a period of six years, in 1885, when he defeated the Hon. James Munro, the late Premier of Victoria. Dr. Beaney was the author of several medical works, including "Contributions to Conservative Surgery". He was munificent in his donations to public institutions in his native place, and offered various medical prizes. He died in Melbourne on June 30th, 1891, bequeathing by his will £10,000 to his native place.

Without further evidence it is impossible to form a proper estimate of Beaney's character or of his influence on contemporary surgery. It may fairly be said, however, that he fully earned an entitlement to the adjective "egregious", which Webster defines as being "distinguished in the bad sense".

Acknowledgements.

The writer is greatly indebted to the Honourable Mr. Justice J. A. Ferguson, of Sydney, and to Associate-Professor K. F. Russell and Dr. T. A. F. Heale, of Melbourne, for valuable bibliographical details.

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Russell, K. F. (1948), "The Royal Melbourne Hospital and Its Early Surgeons", *Royal Melbourne Hospital Clinical Reports*, August, 1948, page 15; (1938) "The First Book on Surgery to be Published in Victoria", *The Australian and New Zealand Journal of Surgery*, Volume VIII, July, page 17.

Reports of Cases.

VITAMIN B DEFICIENCY IN GENERAL PRACTICE.

By MARY C. DE GARIS,
Geelong.

DURING the past eighteen months or two years there seems to have been a notable increase in the incidence of easily recognizable vitamin *B* deficiency in general practice. Up till then it was found chiefly in expectant mothers, but now it occurs in older women.

One wonders whether the difficulty with fertilizers and sprays experienced by our growers has affected our food; that possibility seems to require investigation.

Symptoms may be very characteristic; they show a pronounced periodicity, usually occurring first at night, especially in the small hours. For example, patients are waked by "pins and needles" in the hands, fingers, feet or toes, by stiffness or numbness of fingers, *et cetera*; there may be actual swelling of the fingers so that rings must be taken off. Some have acute pain ("terrible"), starting, for example, at 2 a.m. and lasting for several hours; these patients often do not mention the "pins and needles" until questioned. In the more severe cases, instead of clearing up in the daytime, symptoms continue and are felt especially after exertion. An occasional patient complains chiefly of weakness and tiredness (Case II). Nearly all patients after treatment mention that they are much better in themselves and now feel like working; however, a day's washing may cause a slight relapse. Some patients notice great emotional improvement: one (Case V) lost her long-standing liability to depression; another (Case IV) lost her inclination to cry.

In the milder cases vitamin *B* group and vitamin B_1 tablets give relief; but in the six cases reported below five to ten injections of vitamin B_1 (50 milligrammes per millilitre) were also necessary.

Clinical Records.

CASE I.—Mrs. W., aged thirty-eight years, was in her third pregnancy. On July 3, 1945, at about five months' gestation, she complained of "pins and needles" in the right arm, disturbing sleep; on July 13 she complained of pain in the right arm, of "pins and needles" in the left arm and leg, and of the right leg "going to sleep" without pain; on July 31 she complained of sleepless nights, with continuous aching and "pins and needles" all the time, more severe after she had done the washing; on August 3 she complained of having sat up from 3 a.m. with pain in her arms, for the first time in the left as well as in the right. The administration of "Thiavite" in doses of 50 milligrammes was started on August 4. By August 8 she still felt "pins and needles", but the pain was easier; by August 31 she still waked at 3.30 a.m. with "pins and needles", but had no pain. On October 15 she reported "decent nights".

CASE II.—Mrs. Hi., aged thirty-six years, was in her first pregnancy. On February 13, 1947, she complained of "pins and needles" in the arms and hands. On February 21 they were "just as bad", and she had a nagging pain in her back. She spent much time lying down or in bed. On March 3 she had cramps in her feet and hands in the morning only; she lay down a great deal. On April 19 a live fœtus was delivered with forceps. During her puerperium the weakness of her legs was so pronounced that on April 28 I began injections of "Vibex" (50 milligrammes per millilitre), with speedy improvement. Unfortunately during her pregnancy I had not recognized that her tiredness was a muscular weakness due to the vitamin deficit.

CASE III.—Mrs. B., aged sixty-two years, on February 11, 1949, complained that she had suffered from "terrible pains" for a fortnight; they had started in the middle of the right arm, but now went from the right shoulder to the right elbow, were growing worse, and were more severe at night. On March 8 the pain in her shoulder went down the arm to the hand and up the neck past the ear, and woke her during the night. On March 28 she was well in every way, except for pain in the right hand from the middle finger up past the wrist; the shoulder was unaffected. The pain had begun on the previous day after she had pulled up some vegetables. On examination of the patient, some swelling of the palm of her hand was present and her grip was weak. Injections of "Beta-Sol" (50 milligrammes per millilitre) were begun on March 29. On April 2 her right hand was well, but her left hand was a little affected. On April 6 both hands were well, although she could not carry anything; but slight pain was present in her right shoulder. On April 22, after doing the washing, she had pain in the tips of her fingers going up past her wrist. She had about seven injections altogether, the last on May 7, for intermittent pain in the right leg, the arms and the neck.

CASE IV.—Mrs. C., aged fifty-three years, on April 21, 1949, complained of pain in her left fingers; her left hand grew stiff and she felt a tingle during the day, while pain at night prevented sleep. "Pins and needles" were present in her left fingertips. The left middle finger felt numb. The fingers swelled at night. On April 29 numbness was still present, and she felt tingling in her left middle finger. One night she felt an ache in her left leg. There was less stiffness but still much pain in her hand. On May 2 I began "Beta-Sol" injections. On May 5 she reported some stiffness and tingling with only a little pain. On May 20 the pain from her left toes went up to below her left knee. She had ten injections altogether. On September 14 she had no ache in her hands, but still had slight stiffness in her right shoulder. In October she told me that she felt much better in herself and was much less inclined to cry without cause.

CASE V.—Mrs. Ho., aged sixty-two years, on June 28, 1948, complained of "pins and needles" in both hands, more severe in the left, which she had noticed a fortnight

earlier; on June 27 she had had a momentary "sharp feeling", a pain, in front of her left elbow. She had "a sort of neuritis" at the back of her left shoulder, and sometimes a sharp, short pain in the left inguinal region. On July 27 she telephoned to say that she was feeling much better, but still had "pins and needles". On September 13, some time after hurting her ankle in a fall, she still had "pins and needles", but had lost the pain in her arm. On September 22 the "pins and needles" had gone up both arms; there was no real pain, but the fingers were troublesome—she was still dropping things. She was distinctly less depressed. "Vibex" injections were started, with considerable improvement. On October 20 she felt more able to do things, and had several times walked to my consulting room instead of being driven. She went away for a holiday, and on November 11 reported that some numbness was still present in her hands; she had very mild "pins and needles" and no pain at all, and was energetic. She had nine or ten injections altogether.

CASE VI.—Mrs. Ha., aged eighty-three years, on October 4, 1948, complained of a "terrific" pain in the right thigh, which used to come on about 5 p.m., but now started earlier; on that day it was also present in the other thigh. It was not relieved by aspirin or by an opiate I had ordered her in September. Her daughter said that the patient would cry with the pain till about midnight. The pain came on and went off suddenly. As no other cause was apparent, the nocturnal periodicity and severity of the pain suggested a vitamin *B* deficiency, so I began "Vibex" injections on October 5. I gave about six injections, after whch she thought they disagreed with her; however, she lost her pain and it did not return.

Reviews.

OCCUPATIONAL DISEASE.

"A GUIDE TO THE DIAGNOSIS OF OCCUPATIONAL DISEASES" is a Canadian publication compiled jointly by the staffs of the Industrial Health Division, Department of National Health and Welfare, and the Division of Industrial Hygiene, Department of Health for Ontario.[1] Throughout the world there is an increasing interest on the part of the medical profession, labour and management, in the problems of industrial health. These problems have become more pressing because of the great increase in industrial activity, the ever-widening range of chemical substances used in industry, the need for improved employer-employee relationships and the need for higher industrial efficiency.

To those who are watching the growth of industry in Australia, it will be of interest that in Canada, between 1939 and 1946, the value of manufactured goods and foreign trade increased threefold, while the number of employees in manufacturing alone rose from 658,000 to 1,119,000. Today (1949) in Canada, the number of persons gainfully employed in all occupations is about 5,000,000.

It is necessary that the medical profession should be aware of the potential health hazards which exist in industry, because such hazards must be taken into account in assessing the health of any worker seen in private practice, and because so many general practitioners and specialists are spending some of their time in advising on industrial health problems or acting as medical referees for insurance companies in workers' compensation cases.

This book sets out industrial hazards under the following headings: "Abnormalities of Air Pressure, and of Temperature and Humidity", "Dampness", "Defective Illumination", "Excessive Noise", "Radiant Energy", "Electrical Burns and Shock", "Repeated Motion and Pressure", "Vibration", "Infections", "Dusts and Fumes", and "Harmful Chemicals". It is not claimed that every substance likely to be encountered in industry is covered, nor could any single volume do this, but the book deals in summary form with the common chemicals likely to be met with under the headings of synonyms, formula, properties, uses and occurrence, mode of entry into body, physiological action and toxicity, signs and symptoms, recommended maximum allowable concentration in the working atmosphere, and fire hazard.

Whilst a large part of the book is devoted to this individual consideration of toxic materials, there are smaller sections devoted to the general considerations of occupational diseases and to occupational dermatoses. Two lengthy lists, which will be found useful to the general practitioner, are those setting out occupations and their potential hazards and occupations with their skin irritants. A short chapter on workmen's compensation in Canada and an all-too-short bibliography complete the book.

Apart from technical and medical information which it provides, this publication will be of great use to medical men embarking on the field of industrial medicine, for it sets out simply the basic concepts of industrial medical practice and gives the over-all picture of the doctor as part of an industrial team with managers, chemists, engineers, physicists, personnel directors, safety supervisors and medical staff.

The practice of industrial medicine is sometimes looked on as a field apart from general medicine. It needs to be emphasized now and then that this is not so, if for no other reason than that people exposed to toxic materials at work and patients seen in private practice are very often one and the same persons. The diagnosis of occupational disease rests on the same criteria as those of disease encountered in private practice, but it calls for special knowledge of the materials handled and the conditions of exposure. As this book points out, "it is important to prove exposure to the toxic substance, absorption of the substance into the body and to demonstrate actual signs of ill health caused by absorption".

It will probably be a long time before the precise maximum allowable concentration of toxic materials in the working atmosphere is determined for each substance. A provisional figure is often arrived at after animal experiments, but this is frequently not directly referable to man. This book recognizes that such figures may have to be reviewed from time to time. It is desirable that such review should take place, for, if with any particular substance the figure for maximum allowable concentration is shown to be high, there is risk to the people exposed, and, if too low, unnecessary difficulties in plant operation have been introduced. It will be found that, in this book, a number of the figures given for maximum allowable concentrations vary from the currently accepted figures in Great Britain and Australia.

[1] "A Guide to the Diagnosis of Occupational Diseases: A Reference Manual for Physicians", compiled jointly by the staffs of the Industrial Health Division Department of National Health and Welfare and the Division of Industrial Hygiene Department of Health for Ontario; 1949. Ottawa: The King's Printer and Controller of Stationery. 9" × 6¼", pp. 322. Price: $1.00.

THE EXAMINATION OF WATERS AND WATER SUPPLIES.

THE previous editions of the standard work by Thresh, Beale and Suckling have been accepted as an authoritative manual by water-works engineers, water technologists and others concerned with water supplies. Since the previous edition was published both Dr. Beale and Dr. Suckling, who had collaborated with the late Dr. J. C. Thresh, have died, and the preparation of a new edition was entrusted to Dr. E. Windle Taylor.[1]

Dr. Taylor, who is the Deputy Director of Water Examination, London Metropolitan Water Board, has carefully revised the whole of the subject matter of the book, bringing it into line with modern practice and including in it the results of recent research work. This has involved the rewriting of some chapters and considerable addition to others. In order to prevent the book from becoming inconveniently large, some of the subsections and paragraphs have been printed in smaller, though easily readable, type. Thinner paper has been used so that the latest edition is in fact less bulky than the previous one.

The volume is in nine parts, Part I relating to geological considerations and their bearing upon the suitability of water for public supply purposes. Part II deals with the inspection of the sources of water supply and all water-works. In Part III the scope of the examination of water is discussed in its various aspects, physical, microscopic and chemical. Part IV relates to analytical processes and methods of examination, including that of grossly polluted waters, sewage and sewage effluents. The suitability of water for trade purposes, for use in boilers *et cetera* is discussed, and there is a chapter on the determination of iodine, fluorine, chromium *et cetera* and another on water softening.

[1] "The Examination of Waters and Water Supplies (Thresh, Beale and Suckling)", by Edwin Windle Taylor, M.A., M.D., B.Ch. (Cantab.), M.R.C.S., L.R.C.P., D.P.H. (London); Sixth Edition; 1949. London: J. and A. Churchill, Limited. 9½" × 6", pp. 836, with 52 illustrations. Price: 70s.

Part V deals with the analytical characteristics of waters in relation to their geological origin, chiefly of interest to English workers. Part VI comprises nine chapters in which the bacteriological examination of water and sewage is fully discussed. These chapters have been entirely rewritten and much recently acquired knowledge has been added. The most recently accepted English and American standards of purity are set out in Part VII. The chapter relating to water-borne diseases (Part VIII) has also been rewritten and deals with the subject at greater length than in the previous edition. Part IX is devoted to purification and treatment of water. There is a chapter on the prevention and removal of fungal and algal growths and one on the prevention and removal of colour, odour and taste. Practically the whole of this part also has been rewritten.

The usefulness of the book has been greatly extended by the inclusion of a large number of references to relevant scientific literature. The grouping of the various subjects has been rearranged with advantage and a number of new illustrations have been included.

Dr. Taylor has succeeded in preserving the clarity and "readability" of the subject matter as set out in this comprehensive work and has undoubtedly enhanced its value to all those who are concerned in the examination of water supplies and to water engineers.

SYPHILIS.

"SYPHILIS: ITS COURSE AND MANAGEMENT", by Evan W. Thomas, is a welcome addition to medical literature dealing with syphilis.[1] Thomas does not claim that this book is a complete text on syphilis. It is not. Much in regard to the treatment of syphilis is, at present, undergoing change because of the introduction of intensive methods of treatment with penicillin, and this book is chiefly a presentation of the experience of Thomas and his colleagues with antibiotic therapy used in over 12,000 cases of syphilis at Bellevue Hospital, New York. The material available, it is claimed, "has been so great that it affords ample evidence for the conclusions reached". The author believes that "unless the treponema pallidum develops increased resistance to penicillin, an eventuality which at present seems unlikely, there can be no doubt that penicillin should supplant arsenical drugs in the treatment of syphilis". With this belief in mind he gives comparatively little space to treatment with bismuth, arsenicals and fever therapy and claims that though penicillin can be used in various combinations with heavy metals, it has proved as effective alone as when used in combination.

The interpretation of the results of serological tests is discussed at length, and especially the importance of quantitative tests which are essential if one is to manage patients rationally and have any true idea of the effect of antibiotic therapy.

There are some statements which are debatable, but they are few, and the material is obviously a record of first-hand experience gathered by an enthusiastic and competent observer.

John F. Mahoney, M.D., of the United States Health Service, is responsible for a brief foreword, and Theodore J. Bauer, M.D., of the same service, contributes a chapter on "The Public Health Aspects of Syphilis".

The book should be of value to all who are using penicillin in the treatment of syphilis.

NEW VIEWS ON THYREOID ACTION.

WHEN in 1917 McCarrison announced his belief that the thyreoid gland produced more than one hormone he little dreamed that a professor of physiology in Budapest would one day quote this conclusion in support of a number of statements attributing a mighty array of functions to this gland. G. Mansfeld[2] in his book on the thyreoid hormones and their action puts forward certain views which he might claim to be peculiarly his own. The main contentions of the work may be briefly summarized. Activity of the thyreoid through hormones is necessary for the anti-anæmic principle of the liver to be effective and is in consequence concerned with pernicious anæmia. A myelotropic hormone secreted by the thyreoid stimulates red marrow. Regeneration of damaged gastric mucous membrane is accelerated when the thyreoid is active. Thyroxin is not absorbed directly by the organs, but by the central nervous system; it then passes through the nerves to the organs. If the distal end of the cut sciatic nerve of a frog is dipped in thyroxin solution, that hormone passes along the nerve and increases the metabolism of the gastrocnemius muscle. Thyroxin stimulates the hypophysis to deliver an active secretion into the blood and this increases metabolism. The name thermothyrin is given to an antithyroxin substance elaborated by the thyreoid; it reduces combustion when introduced into the whole animal, but when applied to isolated organs increases the oxidation. There is no increased formation of thyroxin in Graves's disease; in fact there is an analogy between this disease and thyroxin deficiency.

From this summary an estimate of the value of the book can be deduced.

[1] "Syphilis: Its Course and Management", by Evan W. Thomas, M.D., with a foreword by John F. Mahoney, M.D.; 1949. New York: The Macmillan Company. 9" x 6", pp. 340. Price: 42s.

[2] "The Thyroid Hormones and their Action", by G. Mansfeld, M.D.; translated by Erwin Pulay, M.D.; 1949. London: Frederick Muller, Limited. 9½" x 6", pp. 176. Price: 24s.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Collected Reprints of the Department of Ophthalmology, West China Union University College of Medicine and Dentistry, 1938-1945", edited by R. Cunningham, M.D., D.O.M.S., F.A.C.S. China: West China Union University. 9¼" x 7¼", comprising 57 articles, some in Chinese and English.

All articles are by the students and associates of Professor Eugene Chan.

"Quinidine in Disorders of the Heart", by Harry Gold, M.D.; 1950. New York: Paul B. Hoeber, Incorporated. 8" x 5", pp. 132. Price: $2.00.

Intended primarily as a guide for general practitioners.

"Further Rare Diseases and Debatable Subjects", edited by F. Parkes Weber; 1949. London: Staples Press, Limited. New York: Staples Press, Incorporated. 8¼" x 5½", pp. 244, with many illustrations. Price: 25s.

On the same lines as the author's book on rare diseases published in 1947.

"Recent Advances in the Physiology of Vision", by Hamilton Hartridge, M.A., M.D., Sc.D., M.R.C.P., F.R.S.; 1950. London: J. and A. Churchill, Limited. 8" x 5½", pp. 420, with 236 illustrations. Price: 25s.

The author is Director of the Vision Research Unit of the Medical Research Council.

"Diagnostic Radiology: For Practitioners and Students", by G. Claessen, M.D., with a foreword by J. W. McLaren, M.A., M.R.C.S., L.R.C.P., D.M.R.E.; 1950. London: William Heinemann (Medical Books), Limited. 9½" x 6½", pp. 412, with 396 illustrations. Price: 60s.

Deals with "simple radiological problems and diagnosis".

"Brucellosis (Undulant Fever), Clinical and Subclinical", by Harold J. Harris, M.D., F.A.C.P., with the assistance of Blanche L. Stevenson, R.N., and a foreword by Walter M. Simpson, M.S., M.D., F.A.C.P.; Second Edition, revised and enlarged; 1950. New York: Paul B. Hoeber, Incorporated. 9¼" x 6¼", pp. 642, with 44 illustrations. Price: $10.00.

Based on the study of 700 patients, some of whom have been followed for fifteen years.

"Pink Disease: With a Clinical Approach to Possible Ætiology", by Robert Southby, M.D., B.S. (Melbourne), F.R.A.C.P.; 1950. Sydney: Australasian Medical Publishing Company, Limited. 8¼" x 5¼", pp. 54. Price: 6s. 6d. (4s. 6d. to resident medical officers and medical students) *plus* postage.

"Achlorhydria in Children: A Clinically Recognizable Entity", by Robert Southby, M.D., B.S. (Melbourne), F.R.A.C.P.; 1949. Sydney: Australasian Medical Publishing Company, Limited. 8¼" x 5¼", pp. 64. Price: 7s. 6d. (5s. 6d. to resident medical officers and medical students) *plus* postage.

The Medical Journal of Australia

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All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: surname of author, initials of author, year, full title of article, name of journal without abbreviation, volume, number of first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE AGED AND THE "CHRONICS".

WHILE it is not strictly correct to link the aged with those who are chronically ill in any discussion on the provision of a health service for the community, they may be grouped together because of the fact that special provision has to be made for them. The rising cost of the upkeep of hospital beds is one of the factors which make discussion necessary. At a recent meeting of one of the Branches of the British Medical Association in Australia it was stated by a well-known hospital authority that the cost of upkeep of a bed in the teaching hospital with which he was connected had risen to £14 14s. a week. This is fantastic, but the statement must be accepted as correct. It was made when someone in discussion gave £12 12s. per week as the figure. Quite naturally one asks for how long the cost of hospital treatment is likely to increase and what will happen in the future. To use hospital beds at two guineas a day for persons suffering from chronic illness or for those who are helpless because of senile changes is not common sense. When these people have to be admitted to hospital special institutions are needed for them—what they want is nursing attention rather than any of the elaborate equipment used for diagnosis and treatment in the large teaching hospital. This is well known to all who have anything to do with hospital management; but, like so many other features of the present social order, it needs to be drummed into those not intimately acquainted with hospitals who are in a position to correct anomalies or to create public opinion about them.

Let us look first of all at the "chronics", as the chronically ill are commonly dubbed. They are a large, and in many respects a pathetic, body of people. We plead for special institutions, which are more than hostels, where they may be nursed and treated. And it is right that we should do this, especially when we find that they tend to occupy beds in which acutely ill persons should be placed. But such an attitude accepts the position as it exists and does nothing to make the problem less acute for the future. Prevention should be the note—and we should realize that prevention of chronic illness is no less important in the community than prevention of the acute variety. If we could prevent chronic illness, we should be able to cease our clamour for "chronic hospitals", we should be able to stem the ever-increasing expenditure on invalid pensions and we should have the satisfaction of knowing that many of our fellow citizens were able to enjoy life and make something of it. The most important of the chronic diseases have been named as heart disease, arteriosclerosis, arterial hypertension, nervous and mental disease, arthritis, kidney disease, tuberculosis, cancer, diabetes and asthma. It must be admitted that we are grossly ignorant of the causes of many of those conditions, but we must also confess that if everything was done that could be done, if all our knowledge was correctly applied, much suffering could be avoided. It is significant that in America fully one-half of the chronically ill are below the age of forty-five years. (See THE MEDICAL JOURNAL OF AUSTRALIA, October 16, 1948, page 471.) In a previous reference to this subject we concluded that a "substantial proportion" (no exact figures were available) of new invalid pensioners in Australia were below the age of forty-five years. In the prevention of some of the diseases named, especially tuberculosis, the practising members of the medical profession are largely dependent on the steps taken by governments to make provision for sufferers and their dependants. But there is ample scope for the practitioner to exercise a personal influence and even supervision in many matters. For example, recovery from an acute illness should be complete and the medical attendant can make certain of this happening. If necessary he can recommend periodical health examinations. He can also insist on the devising and carrying out of a suitable health programme for the growing child and adolescent—habits which, once learned, will not be neglected. When chronic illness has developed, admission to hospital may be necessary, and it should not be recommended unless it really is necessary. The treatment of a chronically ill person should be carried out with the same assiduity as is displayed towards the acutely ill, and the object must be to restore the patient so that he will be an independent and self-supporting member of the community. If his illness has progressed to such a stage that he is permanently incapacitated, every effort should be made to preserve his morale and even to increase it so that mental factors will not be added to a physical disability. This raises the point that what are known as "chronic hospitals" should not be situated at great distances from the larger teaching hospitals—students need instruction in chronic disease as well as in the acute variety. Of the conditions that have to be met when chronically ill patients have to remain at home no mention will be made in this discussion.

When we turn to the care of the aged, at home or at hospital, we see at once that the problem is one of social medicine just as much as one of curative or preventive medicine shorn of its social aspects. If men and women have grown old in a satisfactory social environment, which from the point of view of social medicine leaves little to be desired, they will be easier to care for than if they have found difficulties, frustrations or inadequacies at every turn. Clearly chronic illness may extend into old age and discussion of the problem will be complicated on that account. In discussing on June 26, 1948, the report of an inquiry at Wolverhampton in Great Britain into the

social medicine of old age we mentioned a division of old people into two groups—those who retain most of their faculties and are able to enjoy a moderate amount of mental or bodily activity or both, and a group of helpless persons who lead what is really a vegetative existence. The old person who leads nothing but a vegetative existence may or may not be the subject of chronic illness—senile degeneration is not illness in the generally accepted meaning of the term. However, whether this is so or not, a helpless old person needs nursing care. It is people in this category around whom most difficulty arises. Relatives may be willing to care for them at home but may be quite unable for one reason or another to do so. Institutional care may be hard to find and when it is found it is not always suitable. With people of our first group who retain most of their faculties the problem is different. Here prevention must be considered. By this is meant, not prevention of old age—that is impossible; the only preventive of old age is death before old age is reached. Prevention is mentioned here in the sense of preparation that will help the old person to be more or less self-sufficient. This means that in addition to having his bodily needs met he will have a mental outlook suited to the best traditions of his environment and that he will have some form of occupation, gainful or not, which will take time off his hands and satisfy his ego. Obviously a great deal of space could be taken up with a discussion on the difficulties of the aged and in this discussion reference would have to be made to old age pensions, their adequacy, the application of the means test and so on. But this cannot be at the moment. It is of interest to note that the National Corporation for the Care of Old People, London, has changed its policy and that in the future, when making grants, it will give preference to homes in which care will be given to the more infirm old people. Attention should also be drawn to a booklet which has been published for the National Old People's Welfare Committee by the National Council of Social Service. The title of the publication is: "Age is Opportunity", and it is described in the sub-title as: "A New Guide to Practical Work for the Welfare of Old People". This booklet is commended to the attention of workers in this subject. The foreword is preceded by a quotation from Longfellow in which occur the words:

> For age is opportunity no less
> Than youth itself, though in another dress.

Another publication germane to this subject comes from Bradford in England where Peter McEwan and S. G. Laverty have reported an investigation and analysis of 701 chronically ill and elderly patients in Bradford hospitals.[1] One statement made in the last chapter is that if once it were to become fashionable to transfer the care of the elderly from the family to the State without loss of "face" and without a guilty conscience, a very big hospital and socio-economic problem would confront the community. McEwan and Laverty think that a geriatric service can be so devised as to avert this evil. Their suggested service is based chiefly on an out-patient department, but ways are suggested for dealing with socio-economic difficulties in the home.

[1] Copies of this report may be had on application to the Secretary, Bradford (B) Hospital Management Committee, Midland Buildings, 12 Canal Road, Bradford, England. Price 5s.

An attempt has been made in this short discussion to draw attention to the problems of the chronically ill and the aged in the light of the constantly increasing costs of hospital management. These problems have their individual peculiarities and difficulties, but it is clear that each can be mitigated by the introduction and continuous use of preventive measures. Results will not be obtained at once, for prevention here, as nearly always, must be a long-range policy.

Current Comment.

COARCTATION OF THE AORTA.

THE American Heart Association, which has played an important part in encouraging interest, research and dissemination of knowledge on circulatory disease, issued in January of this year the first number of a new journal, *Circulation*. The president of the association points out in a foreword that this publication represents not merely a new format of its old publication, but a change in its content and purpose. The name indeed shows this, and it is fitting that in one of the articles a distinguished American surgeon describes how successful surgical treatment of a serious congenital defect in the aorta has, within a remarkably short space of time, become established as a safe procedure in expert hands. Robert E. Gross sums up his experience of one hundred cases of coarctation of the aorta in which the patients were submitted to operation.[1] This condition differs from many of the various congenital vascular abnormalities within the thorax in that it can be recognized with comparative ease by any physician who is alert to perceive its clear signs and who carries out a careful examination. Certainly radiological investigation is necessary in confirmation, but without highly technical procedures the clinician may arrive at a reasonably sure diagnosis by using his eyes, ears and fingers. No longer is this condition one of purely anatomical interest, for not only is surgical relief of symptoms possible for many patients, but added years appear to be given also. Gross points out that the discovery of coarctation of the aorta in elderly people has confused the true picture in the past. Later knowledge has shown that crippling and fatal consequences frequently occur. As has been pointed out in these pages before, large out-patient clinics have been found on careful scrutiny to yield considerable and previously unsuspected numbers of patients with this disability. It is important to realize that these persons were often young and were already suffering from the symptoms of the hypertension of that peculiar "zoned" type found in this disease. From a survey made by Gross and his colleagues it appears that about one-fourth of the patients live far into adult life and some attain old age without special incapacitation. Autopsy may reveal coarctation as a surprise finding in a person who has enjoyed a long and useful life. Another fourth of the patients die of bacterial endocarditis, most often during the third decade, but sometimes during later periods. Sometimes other abnormalities were also present which may have in themselves an incentive for the colonization of the *Streptococcus viridans*, the most common cause. Gross finds that about 40% of those who have coarctation of the aorta have also a bifid aortic valve. The threat of infective endocarditis is of course much less today, with our effective battery of antibiotic agents, but this is an argument for and not against an attempt to give surgical relief to the aortic condition. The third fourth of patients die from sudden rupture of the aorta. These patients are not drawn from the later decades of life, for their average age in Gross's series is only twenty-seven years. Most of the ruptures occur in the ascending aortic arch, but some are found in the thinned-out aorta beyond the block. The balance of the patients succumbed

[1] *Circulation*, January, 1950.

to the complications of hypertension, usually to congestive cardiac failure in early middle life, their age at death being thirty-nine years, or to intracerebral hæmorrhage. Of all persons with coarctation 40% die between the ages of ten and thirty years, and by the fortieth year 60% are dead. These figures are not surprising when we realize that hypertension is firmly established as a rule once the first decade is passed.

Little more need be said here about diagnosis, except to point out that collateral arterial circulation is not always in evidence, and murmurs are variable and not pathognomonic. Diastolic murmurs are more significant than the systolic. The fact that Gross in his article mentions diagnosis in infants with special interest calls for remark and attention. Details of the surgical approach and technical methods are matters for thoracic surgeons, though anyone interested in the subject would surely read this account with concentration. The particular methods described are the relief of the obstruction in the aorta by anastomosis or by excision of the block and reconstitution of the aorta. The ideal is to be able to remove the whole of the stenosed area and to reconstruct the aorta by direct suture, uniting intima to intima, and everting the ends of the vessel. If the part of the aorta removed is too long to permit this, grafts from human beings killed by accidents have been used with success. Gross thinks that experience enables him to look forward to greater safety in the performance of these operations; even in this series of 100 he has achieved remarkable results. Eleven deaths occurred in this series, seven of which are now thought to have been due to causes preventible in the future. The author considers that the death rate can be reduced to 5% or 6%. The end results cannot be fully assessed as yet. Cure of hypertension may confidently be expected; 71 patients out of 80 who were subjected to the described procedures and who survived operation had complete disappearance of their previous hypertension. In nine patients exploration only was performed, and the author recognizes complications and difficulties which are sound indications for refusing to take the risks involved by radical treatment. These operations, now undertaken successfully by expert specialist surgeons in all parts of the world where facilities are available, promise a great deal for the subjects of a disability for which little could be done previously.

TREATMENT OF CIRRHOSIS OF THE LIVER WITH LIVER EXTRACT.

THE interest taken in the diseases of the liver has increased in proportion as it has been directed along physiological rather than purely anatomical lines. Studies in viral hepatitis and its effects on liver structure and function have also helped to lay further emphasis on that property possessed by the parenchymal cells of the liver, regeneration. It is, of course, obvious that once fibrosis has taken place many cells are gone for ever, but less severely affected cells may yet be within the scope of remedial agents. Elaine P. Ralli, Stephen H. Leslie, George H. Stueck, junior, Harold E. Shorr, James S. Robson, Delphine H. Clarke and Bertram Laken have published the results of a long research into the effects of sustained administration of large doses of liver extract on the course of hepatic cirrhosis.[1] They point out that the disease is so serious that as a rule combined methods of treatment are used, so that no factor of possible importance in the regeneration of liver cells may be overlooked. Accordingly, their research was planned to follow the course of the disease over a long period of time, during which standard methods of treatment were pursued. Since substances containing growth-promoting factors seemed to be the most likely to yield good results, yeast, the fractions of the vitamin *B* complex and liver extract were thought to be indicated. For nine years two groups of patients were studied. Those in the first or control group numbered 44; they were given a diet containing 350 to 400 grammes of carbohydrate, 90 to 140 grammes of protein and 120 grammes of fat, reinforced by vitamins *A*, *C* and the important members of the *B* complex. In the earlier stages of treatment the vitamin supplements were given by injection till the patients were able to take them by mouth. Some were also given crude liver extract, five to ten millilitres weekly by intramuscular injection. This dose was too small to be significant in the control group, as that used in the other group was given so intensively and in such large quantities. The second group of 68 patients was treated with intravenous injections of liver extract three times weekly, and also received a diet and supplements identical to those given the members of the control group. Tests were carried out for sensitivity, and by cautiously increasing the doses up to the current therapeutic level little trouble was experienced. Only in two cases was it necessary to relinquish the injections. Dilution of the extract and a slow rate of administration as a rule overcame any temporary signs of sensitivity. As the team's experience grew the dosage was increased. At first ten millilitres of extract diluted with saline or glucose solution was the standard dose, given three times a week, but during the second year it was increased to fifteen millilitres, and by the third year the weekly dose was sixty millilitres. Finally the dose adopted was as follows: during the period of active accumulation of ascitic fluid twenty millilitres five or six times a week, and once the recurrence of ascites was controlled, the same dose, but given only three times a week, and thereafter twice a week, and finally once a week, according to progress.

Patients were carefully followed, and an estimate of their condition was made by determining the total serum protein, albumin, globulin, total and free cholesterol, vitamin *A* and carotene in the blood at four to eight weekly periods. Liver function was at first tested by the bromsulphthalein method, later abandoned in favour of the thymol turbidity test; estimation of the γ globulin was also made. During the past year biopsies of liver tissue have been regularly carried out. It is, of course, evident that all patients in both groups were not observed or treated according to absolutely fixed standards, but the authors in adopting better methods were able to make allowance for such variations. They did not aim at "curing" patients in the fullest sense; some of them in any case had irremediable lesions. The therapeutic aim was to foster regeneration of those parenchymal cells that were capable of regaining a useful degree of function, to restore the blood constituents to a normal pattern and to improve the general bodily nutrition. Comparison of the two groups showed similar distribution of sex and age, and similar nutritional state; jaundice was present in nearly equal numbers, but ascites was much more frequently observed in the patients treated with liver extract. In fact, though only 77% of the control series had ascites, 96% of the second series were so affected, 74% requiring paracentesis, although 70% of these patients eventually had their ascitic effusions successfully controlled. The survival rates of the specially treated group were much better than in the control group. At the end of three years 48% of the former were surviving, but only 12% of the latter. At the end of five years 41% of the second group were still living. It was found, as might be expected, that the serum albumin content did not rise while active ascitic effusions were being formed; in fact it sometimes remained low even after ascites was controlled. Of the results of laboratory tests the first to show any improvement as a reflex on the patient's clinical state was the ratio of free to total cholesterol.

Finally the authors think that their results improved as the intravenous dosage of liver extract was increased; ascites was better controlled, the serum albumin content rose, and the prospect of survival was improved. The publication of the histories of another carefully followed series of patients with hepatic cirrhosis further stimulates interest in the treatment of a condition which, in its end state, has been depressing in the past, and directs attention to the desirability of efforts to help regeneration of liver cells while their rehabilitation is still possible.

[1] *Medicine*, September, 1949.

Abstracts from Medical Literature.

PATHOLOGY.

Myoblastoma.

GEORGE H. MURPHY, MALCOLM B. DOCKERTY AND ALBERT C. BRODERS (*The American Journal of Pathology*, November, 1949) state that myoblastoma was established as a tumour entity by Abrikossoff in 1926, and since then there have been numerous reports and reviews in the literature, from which they have compiled a list of 219 acceptable cases; they have reported ten new cases, making a total of 229 cases on which their analysis is based. Since classification on the basis of Abrikossoff's types is considered unsatisfactory, the following classification is suggested: uniform type, benign or malignant; pleomorphic type, benign or malignant. The uniform myoblastoma arises from adult muscle fibres or from pluripotent mesenchyme, or it may possibly be a storage-cell tumour analogous to xanthoma. It is rarely malignant and is usually cured by simple excision. The pleomorphic type arises from pluripotent mesenchyme and is usually of low-grade malignancy; it often recurs after excision. This type is closely related to rhabdomyosarcoma and should probably be so designated.

Cutaneous Nævi and Melanomata.

ARTHUR C. ALLEN (*Cancer*, January, 1949) states that the junctional nævus is derived from true epidermal cells. The cutaneous malignant melanomata arise from junctional nævi. Hence, malignant melanomata are epidermogenic and should be placed in the category of carcinoma for this reason rather than for reasons attributed to so-called neuroectodermal derivation. The junctional nævus, as well as the seemingly anaplastic juvenile melanoma, rarely is cancerous before puberty. In adults, about 12% of the intradermal nævi are compounded with junctional nævi. The term "compound nævus" is suggested for such lesions. The evidence contradicts the impression that malignant melanomata arise from the common moles (intradermal nævi). When, as occurs in a minority of instances, a common mole is associated with a melanocarcinoma, the latter may be assumed to have grown from the overlying epidermal or junctional element of the compound nævus rather than from the intradermal nævus. The blue nævus and the Mongolian spot are not epidermogenic, but are most likely neurogenic. Because it may be assumed that nævi of the scrotum and of the palmar and plantar aspects of the extremities are junctional nævi, it would seem wise to remove such nævi prophylactically, preferably prior to puberty. The evaluation of the crucial transition from junctional nævus to malignant melanoma may require an extreme nicety of judgement. Criteria for this transformation in early or small lesions are described. The author states that metastatic melanomata to the skin do not provoke the junctional change, and the absence of such change may be used reliably to differentiate a primary from a metastatic melanoma. Junctional nævi and small melanomata of the nipple of the breast may be easily confused histologically with Paget's disease. Similarly, many cases of so-called extramammary Paget's disease are in reality junctional nævi or melanomata. The histological evidence completely supports the concept that the intradermal nævus (common mole) is derived from a downward migration (*Abtropfung*) of the clusters of epidermal cells of the junctional nævus. With regard to the evaluation of therapeutic effects, basic differences between the human and experimental melanomata are stressed. The author considers that neurohormonal participation in pigmentary processes is irrefutably established, but in no sense does it preclude the epidermogenesis of melanomata.

Bone-Marrow Changes from "Aminopterin", "Amethopterin" and "Aminoanfol".

J. B. THIERSCH (*Cancer*, September, 1949) has studied the bone marrow of 21 patients treated with "Aminopterin", "Amethopterin" and "Aminoanfol" through serial aspirations. A general depletion of the marrow affecting both the myeloid and red-cell series was noted. The cells most reduced in the myeloid series were the polymorphonuclear cells and the metamyelocytes. Increased numbers of hypersegmented polymorphonuclear cells and bizarre giant metamyelocytes occurred. The mature forms of the red-cell series disintegrated with disturbed mitosis and abnormal nuclear remnants. The immature erythropoiesis showed a shift toward basophilic forms and a change in nuclear pattern. Primitive erythroblasts and also megaloblasts appeared after prolonged treatment with the antifolic compounds, developing into pathological hæmoglobinized cells with giant red cells and irregular nuclear remnants. The response to the drugs in chronic myeloid leuchæmia was typical in the red-cell series, but irregular in the leuchæmic series. Acute myeloid leuchæmia responded with an increased number of pro-phases and meta-phases of doubtful significance. The pattern of the induced folic acid deficiency, evidenced by changes in erythropoiesis, returned spontaneously to the normal within eighteen days, but recovery was seen within ten days when folic acid or liver was given. Six remissions of tumours, of which five were lymphoid in origin, were seen following periods of at least ten days of induced folic acid deficiency. Some remissions occurred even though the marrow was recovering or had returned to normal.

Carditis in Poliomyelitis.

THEODORE E. LUDDEN AND JESSE E. EDWARDS (*The American Journal of Pathology*, May, 1949) state that myocarditis occurs frequently in acute poliomyelitis, having been observed in 14 of 35 cases of fatal poliomyelitis. Acute vegetative endocarditis and endarteritis of a patent *ductus arteriosus* may occasionally be found in acute poliomyelitis. One example of each of these lesions was present among the cases in the study. Since the cardio-vascular lesions occurring in the cases included in the study were otherwise unsatisfactorily explained, the authors are of the opinion that poliomyelitis virus must be considered as a possible cause of such lesions. Proof that cardio-vascular lesions in acute poliomyelitis are caused by the poliomyelitis virus will depend on demonstration of the virus in the lesions and the experimental production of such lesions. The diagnosis of myocarditis in acute poliomyelitis is seldom made during life. Myocarditis should be suspected in every patient who is seriously ill with acute poliomyelitis. Myocarditis, as observed in the series of cases, was usually more severe and proportionately more common in adults than in young children. The ratio of males to females in the group of patients with myocarditis was 2·5:1, but since the ratio of males to females in the study was more than 3:1, actually a slightly greater proportion of females had myocarditis. There was no specific correlation of type of paralysis—bulbar or spinal—with the presence or absence of myocarditis. The actual role of myocarditis as a cause of sudden death in acute poliomyelitis could not be determined in the study, except in one patient, who had a perforation of the right atrium. Three of the six patients who died suddenly were found to have myocarditis, but all of these patients had bulbar involvement, which might have explained their sudden deaths.

Experimental Pulmonary Œdema of Nervous Origin.

G. R. CAMERON AND S. N. DE (*The Journal of Pathology and Bacteriology*, July, 1949) state that acute pulmonary œdema can be produced experimentally by cisternal injection of a fibrin-forming mixture. Whole blood or particulate suspensions such as India ink give similar though less constant effects. Records of the respiratory excursion, carotid blood pressure and right auricular pressure show that these undergo similar changes after severe tracheal obstruction, pulmonary embolism with starch granules, and cisternal injection of fibrin with or without bilateral vagotomy, but only the last of these procedures is followed by acute pulmonary œdema. These results suggest that neither asphyxia nor mechanical disturbance in the pulmonary circulation plays any part in the genesis of the œdema. The stimulus for œdema production arises within the central nervous system, for the irritants cease to be active when they are injected extracisternally, when both vagus nerves are divided or their endings paralysed with atropine, or when cocaine is administered before the cisternal injection. The increased cerebro-spinal fluid pressure which follows the cisternal injection is not the œdema-producing stimulus. It is suggested that the permeability of the lung capillaries may be modified by the outflow of stimuli from the brain stem by way of the vagus nerves, and thereby plasma leaves the pulmonary vessels on so large a scale as to induce œdema of the lungs.

Acute Œsophagitis in Infants.

PETER GRUENWALD AND MEMOIR R. MARSH (*Archives of Pathology*, January, 1950) found acute œsophagitis, usually with ulceration, in one out of every six infants in a series of 310 autopsies. They believe that the significance of this lesion ranges from an unimportant accidental finding to the principal cause of death. Various possible causes are considered, and no single factor is found which might explain all cases. It is suggested that in many of the present cases œsophagitis was a "shock lesion". In the neonatal group of patients, shock may have been the result of various types of birth trauma, including

asphyxia. Microorganisms were demonstrated in tissue sections in half the cases. They were of different types and are believed to have been secondary invaders. Œsophagitis can thus conceivably be a focus from which infection may spread. Vomiting and hæmorrhage occurred frequently in the patients with œsophagitis; perforation into the right pleural cavity was encountered twice. The authors consider that an effort should be made to diagnose œsophagitis in living patients, not only because the lesion, if severe, should be treated, but because it may be an indication of shock, which is difficult to recognize in infants. The validity of the present suggestions will be ascertained, and the significance of œsophagitis properly evaluated, only when more clinical observations are available.

Histological Observations on Dermatomyositis.

WALTER PAGEL, A. L. WOOLF AND R. ASHER (*The Journal of Pathology and Bacteriology*, July, 1949) report three cases of dermatomyositis which showed a triad of changes affecting striated muscle, blood vessels and connective tissue. The most striking changes in muscle were (*a*) vacuolation and shrinking of the muscle substance, with altered staining affinity and loss of transverse striation, and (*b*) increase in the number of myogenic nuclei, which appeared surrounded by fragments of muscle substance, so that syncytia were sometimes formed. Comparative studies showed these changes to be non-specific, since they are observed in muscle subjected to various pathogenic stimuli. The principal vascular change was annular or localized fibrinoid degeneration of the arteriolar walls, occasionally leading to occlusion of the lumen followed by hæmorrhage. In two of the cases this occurred in the absence of hypertension. In the connective tissue extensive œdema and fibrinoid change in the collagenous fibres were observed. The non-specific nature of these changes in the blood vessels and connective tissue was illustrated by their occurrence in cases of subacute bacterial endocarditis, in scleroderma with rheumatoid arthritis and in fulminant tuberculous septicæmia. The extent to which these changes resemble the "diffuse collagen disease" postulated by Klemperer *et alii* is discussed.

MORPHOLOGY.

The Olivo-Cerebellar System.

R. B. KING (*Journal of Comparative Neurology*, December, 1948) reports the results of ablative lesions of the inferior olives and interolivary regions in more than 100 preparations involving primarily rabbits aged three weeks. Lesions were made surrounding the olivary region to exclude interruption of neighbouring tracts as contributory factors to the functional changes which appeared after olivary and interolivary lesions. Functional abnormalities frequently associated with olivo-cerebellar ablations were seen, but a pronounced loss of muscle tone in the trunk and limb girdles, not associated with a reduction of muscle strength in the distal free extremities, was the most striking change in motor response seen after interolivary and bilateral olivary ablations. This loss of tone suggests the possibility of a specific function of the olivo-cerebellar system in this animal, and the author proposes to follow up this work with electrophysiological techniques and in other mammals. That the results of these experimental lesions may reflect a portion of cerebellar function specifically related to the olives must be considered, since critical lesions involved both olives or the interolivary region. Marchi degeneration studies in control and critical lesions support this thesis. Although interruption of an olivo-cerebellar system maintaining muscle tone by tonic discharge seems likely, there remains the possibility that an active suppressor mechanism has been released by ablation of a dominant centre. The rapid recovery of function seen in these animals suggests that a compensating mechanism for the deficit in olivary function is readily available. The nature of the compensating mechanism is being investigated.

Significance of Bone Form.

LEO ESTEL AND C. W. ASLING (*American Journal of Physical Anthropology*, December, 1948) state that the shape of bones and the location of their various protuberances have often been the bases for speculation as to their dynamic significance. The purpose of the present report is to describe a method by means of which these inferences can be tested experimentally, and to show the result of applying this approach to a specific problem. The subject selected for analysis was the efficiency of flexing and supinating movements of the forearm, as affected by the position of the bicipital tuberosity of the radius, and the results were very satisfactory.

Intrinsic Nerves of Mammalian Kidney.

P. J. HARMAN AND H. DAVIES (*Journal of Comparative Neurology*, December, 1948) have studied histological preparations of the nerves in the kidney of a wide variety of mammals, including man, and report confirmation of results of previous workers. Nerves were found throughout the stroma and parenchyme of the kidney, especially associated with the vessels. Nerve endings were observed in the capsule, around blood vessels, in epithelium of pelvis and tubules on Bowman's capsule, and within the renal corpuscle. In addition certain structures not previously described were observed. These are coiled vessels forming a glomus interposed between arteries and veins. They present epithelioidal modifications in their walls and are liberally supplied with nerves; it is suggested that they play a role in the normal regulation of blood flow in the kidney. The direction of conduction in the nerves seen and the pathways centrally of the various components of the renal nerves have not been established.

Efferent Connexions of Frontal Lobe in Human Brain.

M. MEYER (*Brain*, September, 1949) has examined brains of patients with a short survival time after leucotomy, using a silver method to trace corticofugal fibres to their termination in subcortical nuclei. No fibres from the prefrontal areas were found to terminate in the thalamus or extrapyramidal nuclei except a few which terminated in the dorso-medial nucleus of the thalamus. When the leucotomy lesions extend into the white matter which underlies dysgranular and agranular cortex of the frontal lobe, terminal degeneration is present in the mammillary body, the dorso-medial and ventro-lateral group of nuclei of the thalamus, the *globus pallidus*, the *zona incerta*, Forel's field, the red nucleus and the subthalamic nucleus. It has been possible to demonstrate that the cortical fields projecting to these centres are confined to the rostral part of Brodmann's areas 8 and posterior 9 (Economo's area FC). The extent and importance of frontal projections to the ventro-lateral group of thalamic nuclei in the human brain is emphasized. A projection from the rostral cingular gyrus to the anterior nucleus of the thalamus could not be demonstrated. Of the extrapyramidal nuclei the finding of a direct corticopallidal pathway is of particular interest. Fibres from the frontal cortex were seen to terminate in the red nucleus after lesions which certainly exclude areas 4 and 4s. Degeneration of fibres of the frontopontine tract in the most medial part of the peduncle was present after lesions anterior to the premotor cortex.

Peripheral Nerve Trunks Devoted to Nerve Fibres.

S. SUNDERLAND AND K. C. BRADLEY (*Brain*, September, 1949) have calculated the percentage cross-sectional area of nerve trunks occupied by funiculi of nerve fibres and interfunicular tissue respectively. Estimates were made at several levels in twenty specimens each of the radial, median, ulnar and sciatic nerves. Following suture of a severed nerve, the degree of separation of the bundles becomes a factor affecting the entry of regenerating axons into the endoneurial tubes of the funiculi of the distal stump and therefore a factor influencing the extent and quality of recovery. The present report relates to the factors which are concerned (after suture of a severed nerve) with the entry of regenerating axons into the funiculi.

Mesencephalic Root of Trigeminal Nerve.

A. A. PEARSON (*Journal of Comparative Neurology*, February, 1949) has studied the development and connexions of the mesencephalic root of the trigeminal nerve in a series of human embryos and fœtuses. Observations on the brains of newborn babies, children and adults are included in the report. He states that the mesencephalic root of the trigeminal nerve constitutes one of the main pathways in the brain stem for the conduction of muscle sense impulses, and its connexions are not completely understood. In this investigation fibres of the mesencephalic root were followed into the cerebellum where they were lost in the region of the dentate and emboliform nuclei. Other fibres were followed into the anterior medullary velum where they decussate, and yet others were found to descend in the brain stem where they connect with centres in the *medulla oblongata*. Other cranial nerves, especially the third and fourth, are thought to contribute fibres to the mesencephalic root.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Tasmanian Branch of the British Medical Association was held at the Royal Society's room, the Museum, Hobart, on February 4, 1950, Dr. T. G. H. Hogg, the President, in the chair.

The President welcomed to the meeting Dr. Clifford Colvin, of Orange, New South Wales, and the Editor of THE MEDICAL JOURNAL OF AUSTRALIA.

MINUTES.

The minutes of the previous annual meeting, held on February 26, 1949, were read and signed as correct.

ANNUAL REPORT OF COUNCIL.

The annual report of the Council, which had been circulated to members, was taken as read and adopted on the motion of the President, seconded by Dr. L. N. Gollan. The report is as follows.

The Council has pleasure in presenting the annual report of the work of the Branch for the year ended December 31, 1949.

Membership.

The membership as at January 1, 1950, was 169, compared with 166 at the beginning of 1949.

Analysis:

As per last report	166	
Elected during 1949	12	
Reelected during 1949	1	
Transfers from other Branches	13	
		192
Less—		
Transfers to other Branches	12	
Resigned	2	
Deceased	3	
Lapsed	6	
		23
		169

(Note: Of the lapsed members, two have since paid their subscriptions for 1949.)

Obituary.

The deaths of the following members are recorded with regret: Dr. R. W. Lawrence, Hobart; Dr. L. O. Macnamara, Launceston; Dr. F. J. B. Drake, Hobart.

Meetings.

Branch.—Since the last report three meetings of the Branch were held with the average attendance of 23.

Council.—Fourteen meetings of the Branch Council were held since the last report, and the attendance was as follows: Dr. T. G. H. Hogg 14, Dr. J. L. Grove 14, Dr. J. B. G. Muir 10, Dr. J. Bruce Hamilton 11, Dr. L. N. Gollan 11, Dr. C. Craig 11, Dr. B. Hiller 13, Dr. S. G. Gibson 11, Dr. F. R. Fay 14, Dr. T. Giblin 9, Dr. A. O. Green 12, Dr. G. R. Beattie 10.

General.

The Council has had much of its time occupied in the last year giving consideration to various problems associated with the *Pharmaceutical Benefits Act* and the national health scheme. The future of these aspects of medical practice seems much less disturbing now than six months ago and fresh negotiations have been commenced between the British Medical Association and the Federal Minister for Health.

The Tasmanian Branch has been ably represented on the Federal Council by Dr. J. L. Grove and Mr. T. Giblin. They have been reappointed as your representatives again during 1950.

The Branch Council was very pleased with the response of members to the Federal Independence Fund, and we can all feel that the result was most successful.

A satisfactory agreement was reached with the friendly societies, based on the Federal Common Form of Agreement, copies of which are now printed and available to members. Members are advised to get their copies and have them signed as the lodge rates will vary as the basic wage varies.

During 1949 payment to in-patient honoraries at the public hospitals was commenced retrospective to July, 1948, at the rate of £4 per three-hour session. This was accepted under protest as the rate was considered insufficient, for it was felt by your Council that emergency surgery should be paid for, and out-patient staff should also be paid.

The Branch Council, as representing the British Medical Association, was consulted by the State Legislative Council for suggestions prior to framing the Tuberculosis Bill. Certain recommendations were made, and a number of these were incorporated in the Act. It is hoped that this procedure may be repeated when bills of medical importance come before Parliament.

Conferences between the Minister for Health and representatives of the Branch Council were held on the following dates:

June 25: Hospital policy with particular regard to country hospitals.

July 28 and 30: Medical advisory committees, registrars, specialists, intermediate beds.

BRITISH MEDICAL ASSOCIATION—TASMANIAN BRANCH.

Income and Expenditure Account.

EXPENDITURE.	£ s. d.	£ s. d.
To Secretary's Salary		260 0 0
„ Printing, Stationery, Typing and Duplicating (including Newsletters)		125 8 7
„ Postage, Duty Stamps, Telephone and Telegrams		74 1 3
„ Aerial Insurance	44 19 6	
Less Collected	37 7 6	
		7 12 0
„ Travelling Expenses—		
Branch Council	263 0 0	
Secretary	5 15 0	
		268 15 0
„ Capitation Fees—		
Federal Council	173 5 0	
Australasian Medical Publishing Company, Limited	166 0 0	
British Medical Association, London	226 6 3	
Southern Division	52 0 0	
Northern Division	34 10 0	
		652 1 3
„ Audit Fee		3 3 0
„ Rent of Rooms		2 0 0
„ Donation to Repatriation Medical Officers' Association		10 0 0
„ Code Address Fee		2 2 0
„ Bank Charges		1 17 9
„ Excess of Income over Expenditure		139 8 5
		£1,546 9 3

INCOME.	£ s. d.	£ s. d.
By Members' Subscriptions		1,309 12 0
„ Interest—		
Debentures	8 8 9	
Commonwealth Loans	28 6 6	
		36 15 3
„ Grant from Federal Council		200 0 0
„ Sale of Lodge Agreements		0 2 0
		£1,546 9 3

BRITISH MEDICAL ASSOCIATION—TASMANIAN BRANCH.

Headquarters Fund Account.

	£	s.	d.		£	s.	d.
To Balance, January 1, 1949	100	0	0	By Balance, December 31, 1949	203	14	9
„ Bank Interest	2	1	3				
„ Legacy—Dr. G. C. Walker	100	0	0				
„ Interest on Legacy	1	13	6				
	£203	14	9		£203	14	9

Balance Sheet as at December 31, 1949.

Liabilities.	£	s.	d.	£	s.	d.	Assets.	£	s.	d.
Headquarters Fund Account				203	14	9	English, Scottish and Australian Bank (Current Account)	289	9	11
Capital Account—							Hobart Savings Bank (Headquarters Account)	203	14	9
Balance, 1948	1,346	0	3				A.C.T. Bonds	860	0	0
Add Surplus, 1949	139	8	5				Australasian Medical Publishing Company, Limited—Debentures	245	3	9
Australasian Medical Publishing Company, Limited—Debentures issued	62	5	0				War Savings Certificates	133	0	0
				1,547	13	8	Furniture	20	0	0
				£1,751	8	5		£1,751	8	5

Audited and found correct.

(Signed) ADAMS & BENNETTO,
Chartered Accountants (Aust.).

November, 1949: Rates of payments to visiting hospital staff.

During the year the Branch Council has defined its policy on the following matters, *inter alia*: (*a*) the staffing of public hospitals and provision of adequate medical services to the community; (*b*) the composition and functions of medical advisory committees for major base hospitals; (*c*) the introduction of private and intermediate beds in public hospitals.

Negotiations with the manager of Harvey Trinder have resulted in a very satisfactory type of aerial insurance now being available to individual members of the Branch, the cover being £10,000 for a premium of £1 12s. 6d. per week.

A survey of the distribution of doctors per head of population in Tasmania was carried out in September. It revealed that, apart from three areas in Southern Tasmania, the community was well provided for on the basis of one doctor per 1000 population.

The Ethics Committee for the past year consisted of the President, Dr. Hamilton, Dr. Green, Dr. T. Giblin, Dr. S. Gibson, Dr. Craig, Dr. L. N. Gollan, Dr. Grove and the Medical Secretary.

The Publicity Subcommittee has been fairly active, and there has been a closer liaison between the publicity emanating from the Federal Council and that from the State Branch resulting in better presentation of British Medical Association views to the public. The reception of the broadcasting programme was very pleasing, and its result very effective.

The Workers' Compensation Subcommittee met the Chief Secretary and representatives of the underwriters, and as a result, a higher schedule of workers' compensation fees, based on the New South Wales schedule, can be expected in the immediate future.

A liaison committee with the Pharmaceutical Service Guild was set up in the latter part of the year for the discussion of mutual problems. This is similar to a committee functioning in Victoria, and it is expected several meetings will be held in 1950.

Most of this report has been passed on to members via the official newsletter, which has continued to be published throughout the year. The Branch Council feels that the newsletter should be continued as an effective method of liaison between them and the members of this Branch throughout Tasmania.

Copies of the year's income and expenditure account and balance sheet are forwarded with this report.

(Signed) T. G. H. HOGG,
President.

FINANCIAL STATEMENT.

The income and expenditure account and the balance sheet for the year 1949 were presented by Dr. B. Hiller and were adopted on his motion, seconded by Dr. L. N. Gollan. The financial statements are published herewith.

REPORTS OF DIVISIONS.

The annual reports of the Northern and Southern Divisions of the Branch were read by Dr. L. N. Gollan and Dr. G. R. Beattie respectively.

ELECTION OF OFFICE-BEARERS.

The President formally declared the following members elected to the several offices.

President-Elect: Dr. G. W. Clemons.
Vice-President: Dr. C. W. Clarke.
Medical Secretary: Dr. F. R. Fay.
Members of Council: Dr. J. B. G. Muir, Dr. A. O. Green, Dr. C. Craig.

ELECTION OF AUDITORS.

Messrs. Adams and Bennetto were reelected auditors for the ensuing twelve months.

INSTALLATION OF PRESIDENT.

Dr. T. G. Hogg then vacated the chair and installed Dr. S. G. Gibson as president for the ensuing twelve months. He thanked the members of the old Council for their support during his term of office. He made particular reference to the work of Dr. J. Bruce Hamilton as Vice-President and of Dr. B. Hiller (Honorary Treasurer) and Dr. F. R. Fay (Medical Secretary). He thanked the Lay Secretary for his work during the year.

Dr. S. G. Gibson, on taking the chair, thanked the members for his election.

FEDERAL REPRESENTATIVES.

Dr. L. N. Gollan moved a vote of appreciation of the services of Dr. T. Giblin and Dr. J. L. Grove as Federal Council representatives during the year. The vote was carried by acclamation.

RETIRING PRESIDENT'S ADDRESS.

Dr. T. G. H. Hogg then read his retiring president's address (see page 581). At the conclusion of the address a vote of thanks to Dr. Hogg was carried by acclamation.

SCIENTIFIC.

A MEETING of the Victorian Branch of the British Medical Association was held on November 16, 1949, at the Medical Society Hall, East Melbourne, DR. ROBERT SOUTHBY, Vice-President, in the chair.

Symposium on Poliomyelitis.

DR. STANLEY WILLIAMS read a paper entitled "Clinical Aspects of Poliomyelitis during the Epidemic of 1949" (see page 582).

DR. B. P. MCCLOSKEY read a paper entitled "Recent Developments in the Epidemiology of Poliomyelitis, with Special Reference to the Epidemic of 1949" (see page 583).

DAME JEAN MACNAMARA read a paper entitled "The After-Care of Poliomyelitis" (see page 588).

DR. H. MCLORINAN read a paper entitled "Poliomyelitis: Hospital Management" (see page 587).

DR. W. OSTERMEYER reminded those present that the recent series of epidemics of poliomyelitis had been recurring since early in the present century, and that he had been in charge of a special ward at the Royal Melbourne Hospital set apart for victims of poliomyelitis in 1918.

DR. ELIZABETH MCCOMAS drew attention to the delay that could occur in the onset of paralysis, which might come on slowly over a week or longer.

DR. MARJORIE GILCHRIST asked Dr. McCloskey if he was prepared to supply the data on which the circular was based in which it was suggested that immunizing injections, especially against pertussis, might favour the development of paralysis in poliomyelitis.

DR. MOSTYN POWELL referred to the difficulties during an epidemic of poliomyelitis in excluding certain syndromes that were not due to poliomyelitis. He had a list of what might be termed "negative" indications, the presence of which enabled him to determine the probability or otherwise of the diagnosis of poliomyelitis. It was helpful to know that the diagnosis was "out" in the presence of diarrhœa, or of cough, or of severe vomiting or of sore throat. If the temperature was over 105° F. or was not elevated at all, the condition was usually not poliomyelitis.

DR. ROBERT SOUTHBY thanked the speakers for their contributions. He said that, though he concurred with what Dr. Williams had said about the absence of pain in the early stages, he had nevertheless come across some patients who were hyperæsthetic. He was also in agreement with Dr. McLorinan's description of the symptoms. Dr. Southby commented that the notices in the daily Press declaring that an epidemic was "on" produced rather than allayed panic. The spread of the disease was along the lines of human communications, and it was sound to keep the unaffected children in regular attendance at school, provided that they were not packed in close contact in trams and omnibuses coming to and from the schools. He added "convulsions" to the "negatives" of Dr. Powell.

Dr. McCloskey, in reply to Dr. Gilchrist, said that he was not yet in a position to supply the information requested fully; but in reference to a number of the children aged under three years they had obtained a history of an immunizing injection within thirty-five days of the onset of poliomyelitis. most of the injections being against pertussis, and the arm used being the site of complete flaccid paralysis. The time-interval in those cases had averaged eleven days, which corresponded with accepted estimates of the incubation period in poliomyelitis. In reply to Dr. McComas, Dr. McCloskey said that, in his study of the present epidemic, the duration of the preparalytic period had usually not been increased beyond three or four days, but it might have been longer in a few instances. Roughly speaking, the prodromal phase occupied three days, the malaise two days and the invasive phase three days.

Congress Notes.

THE AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

THE Executive Committee of the Seventh Session of the Australasian Medical Congress (British Medical Association) to be held at Brisbane, Queensland, from May 27 to June 3, 1950, has forwarded the following information for publication.

Academic Dress.

Academic dress is traditionally worn at four of the functions of congress week—at the church services, the President's reception, the inaugural meeting and the public lecture.

The following information has been received from the honorary (local) secretary, New South Wales: The Buttonhole Fancy Costume Company, of 116 Liverpool Street, Sydney, has a limited number of gowns, about 25, and some M.B. and B.S. hoods. The cost of hiring them is quoted as 15s. per fortnight. The firm would need a good deal of notice, as it is anxious not to clash with any function at the University of Sydney where the gowns may be needed.

The Medical Secretary of the Victorian Branch (Dr. C. H. Dickson) has supplied the following information. The University Union has a certain amount of academic dress, but only one scarlet M.D. gown, four master's gowns and about fifty bachelor's gowns. It has no hoods for degrees of other universities. It may be possible for graduates to hire gowns and hoods upon individual application.

Mr. Bredon (David Lack and Sons), 316 Elizabeth Street, Melbourne, has details of the different patterns and colours of hoods of British universities, and is willing to make to order.

It has been decided that evening dress or dinner dress (with decorations) will be worn at evening functions and that academic dress will be worn at the inaugural meeting, presidential reception and public lecture and also at the church services.

Congress Dinner.

The Medical Women's Society has decided not to hold a separate dinner on the night of the congress dinner. As the women members of congress are equally welcome with the men to the congress dinner, it will be left to each one to decide whether she will attend the dinner.

Attention is drawn to the previous "Congress Notes" in which it was pointed out that wives or relatives of members who are not themselves members of congress cannot attend the congress dinner.

The Medical Women's Society is holding a luncheon to entertain visiting medical women who are members of congress at the National Hotel on Monday, May 29, at 12.30 p.m. Immediately following this luncheon a meeting of the Australian Federation of Medical Women will be held.

Congress Ball.

The President and councillors of the Queensland Branch of the British Medical Association are inviting overseas and interstate visitors and their wives to the British Medical Association ball to be held on Friday, June 2. All those who intend to accept this invitation are urged to write immediately to the Honorary General Secretary, Congress Office, as arrangements have to be made for catering.

Registration of Congress Members.

We have decided to start registering members of congress on May 26, and are asking as many local members as possible, and all others in Brisbane at the time, to take advantage and register on that date so as to prevent overcrowding on the Monday.

Obituary.

LESLIE SCOTT LATHAM.

WE are indebted to Sir John Newman Morris for the following account of the career of the late Dr. Leslie Scott Latham.

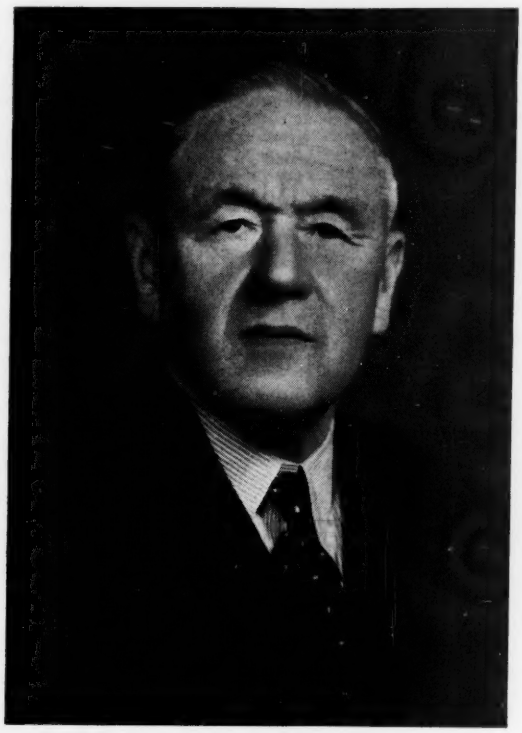
Dr. Leslie Scott Latham has passed from us, and to those who, like myself, regarded him with great affection and high admiration, it is hard to realize that he has gone and that no longer will our friend be with us. For his widow, part of life has departed with him, and we can only offer profound sympathy, what help we feel Les would like us to offer, and a share in her sorrow.

For seventy years his life was full of achievement and kindly deeds. He was born at Fitzroy, a suburb of Melbourne, on June 13, 1879. At the date of his death on January 21, 1950, he was President of the Royal Australasian College of Physicians, whilst his elder brother, Sir John Latham, was Chief Justice of Australia, and a younger brother is one of Australia's leading actuaries. These distinguished brothers, each at the head of his profession simultaneously, have played a great part in the history of Australia for more than half a century.

Dr. Latham had a most distinguished academic career, both at Scotch College, Melbourne, and at the University of Melbourne, where he excelled first in the schools of philology and classics, and then in medicine. Honours and exhibitions were won in each of these fields, in which he took the highest degrees. For a short period he conducted a general practice at Ivanhoe after his residentship at the Royal Melbourne Hospital. Then at the early age of twenty-nine, he was appointed an indoor physician at Saint Vincent's Hospital. Here, with Dr. Rowden White and the late Dr. Alex Lewers, he was one of the group of

young physicians and surgeons who laid the foundations of clinical teaching at this hospital, now one of the great clinical schools of the Medical School of the University of Melbourne. He relinquished this position in 1936 and was appointed to the consulting staff of the hospital. Latham was a great medical teacher, and in 1921 he was appointed Chairman of the Board of Stewart Lectures in Medicine at the University, and in this capacity was for fifteen years responsible for the instruction and examination in medicine in Victoria.

In a quiet and unostentatious but most effective way, Dr. Latham rendered great public service in which loyalty to his school and Alma Mater was conspicuous. He was a member of the Council of Scotch College and for several years was President of the Old Scotch Collegians Association. Like his brother Sir John, his association with the



university covered practically the whole period commencing with his matriculation. This great service can best be recorded by citing the resolution passed by the Council of the university on March 6, 1950.

> The Council has received the news of the death of Dr. L. S. Latham with the greatest regret. After a most distinguished and many-sided undergraduate career he continued throughout his life a devotion to the interests of the university for which the Council desires to record its profound gratitude. He was Chairman of the Board of Stewart Lecturers in Medicine from 1921 to 1937 and Warden of Convocation from 1935 to 1944. He was appointed to Council in 1944, and was deputy Chancellor from 1947 to 1949, and served many committees. Dr. Latham was a scholar-physician of the finest type who will be greatly missed in innumerable ways.

Dr. Latham gave much unselfish service to the honour and interests of the profession which he so much adorned. Soon after graduation he joined the British Medical Association and served on the Council of the Victorian Branch for many years. In 1923 he was elected President of the Branch at the age of forty-four, being one of the youngest presidents. During his year of office the Australasian Medical Congress was held in Melbourne. The following resolution was adopted by the Branch Council at its meeting on February 22, 1950.

> That the Council of the Victorian Branch of the British Medical Association records with regret the death of Leslie Scott Latham, M.A., M.D., B.S., F.R.A.C.P., who, as a member of the Branch Council from 1915 until 1938 and its President in 1923 and as a consulting physician and the holder of many public offices in Victoria, made a great contribution to the professional and public life of the State. Council extends its sympathy to Mrs. Latham and her daughter.

He was a member of the Medical Board of Victoria for some years and served for a long period on the Council of the Medical Defence Association in which he succeeded Dr. Murray Morton as President, resigning from that office in 1949, but still remaining as a councillor. As President for four years of the Medico-Legal Society, Dr. Latham did much to foster closer relations between the medical and legal professions. He served in World War I as a major in the Australian Army Medical Corps in the 14th Australian General Hospital in Egypt.

Dr. Latham held a distinguished position as a consulting physician for many years in Melbourne, and was noted for his meticulous attention to the rules of etiquette and conduct in professional consultations. It was a delightful and inspiring experience to call him in to one's patients and his contribution to diagnostic and therapeutic problems was always most helpful. In 1932 he became Chief Medical Officer for Victoria of the Australian Mutual Provident Society, relinquishing that position only during 1949.

He took an active part in the formation of the Royal Australasian College of Physicians, becoming a councillor in 1944, vice-president in 1946-1948, and, as recorded above, was its president at the time of his death.

Apart from his professional life and achievements, Dr. Latham had wide interests in matters which appealed to his intellectual talents and to the public welfare. He was a member of the committee of Melbourne Athenæum, of the Classical Association and of other bodies where he could meet with men of similar minds to his own.

The high ideals of Rotary appealed to him and he was admitted to Melbourne Rotary in 1928, and it is recorded that from the outset he threw himself most enthusiastically into the various activities of the club. "Possessed of a cultured and well-informed mind", records the club journal, "lucidity of expression, a modest and attractive personality, a sympathetic outlook and demeanour in his relations with his fellow men, he was an ideal Rotarian."

Apart from his wide intellectual recreations and interests, Latham had two main hobbies for exercise—walking and tennis. He was for many years a member of the Wallaby Club of Melbourne, a body including in its membership many distinguished citizens, who take long week-end walks, enlivened by discussions on a high level. He was President of this club in 1926-1927. But tennis was his most constant and enjoyable regular form of exercise till the very last moment of life.

This brief account of the activities of a long life will place on record some of the achievements of one of the brightest and most distinguished ornaments of Australian medicine. But words can do little to provide a picture of the man himself. He inspired friendship and confidence and affection. His enjoyment was in the highest realms of thought and the simplest pleasures of life.

It was a joy to meet him in his own home with his charming wife and children or to have them visit in one's own home.

That Leslie Scott Latham was a man of courage in personal adversity was shown when, some years before the war, his beloved only son died.

The widespread tributes paid to his memory have shown how deeply this quiet cultured doctor of medicine had impressed the people amongst whom he lived. His friends will miss him, but to his wife and family his loss is irreparable, and all who knew him feel for them the deepest sorrow and sympathy.

Dr. A. E. Rowden White writes: Dr. L. S. Latham was so richly endowed with many high qualities and virtues that it is not possible to do justice to them all in the space available. His amiable disposition and worldly wisdom made him everyone's friend and it was only natural that he was much sought after for valuable advice which he gave most willingly on all kinds of subjects and affairs. Social and cultural clubs gladly welcomed him, and as he was an able speaker with lucidity of expression he soon became an active leader in many of them. Both he and his wife (formerly Miss Ida Wilson, M.A., daughter of the late Dr. J. P. Wilson, headmaster of the Presbyterian Ladies College) were regular visitors at the Union Club (university) lectures, readings and theatrical productions. His love for languages, ancient and modern, which he cultivated during his arts course (graduated B.A. in 1900, and despite

a busy medical practice he qualified for his M.A. degree in 1921), he retained keen interest in them throughout his life and was a very active member of the Classical Association during that time. The very high regard and esteem in which he was held was demonstrated by its members electing him their president—a very distinguished honour indeed—just before his death. Years of his life were given to the university on its administrative side, first at convocation, next on Council, and then a very useful period of two years as Deputy Chancellor. Later with this rich and wide experience he was wisely elected the sixth President of the Royal Australasian College of Physicians for two years, which he had almost completed at the time of his death.

Leslie Latham's life was one of great achievement. He possessed a cultured and well-informed mind, a lovable, unassuming, modest, and one might add shy, temperament, staunch in his friendship and always kindly in his outlook. The political and revolutionary changes of the past few years were distasteful and hurtful to his sensitive mind and usually he would look for some relief and escape from them in deep research in history or languages or some difficult problem in philology. Many of his intimate friends considered that his profound classical knowledge held a higher interest in his life than the success he had achieved in general medicine. Be that as it may, his services to the community in his profession were outstanding, and his untimely death will leave many a sorrowful heart.

Despite the very full life which he gave to the community generally, his chief relaxation was lawn tennis, and this he played with great regularity and pleasure. It is sad to relate that it was while enjoying a game on January 21, 1950, that he died suddenly on a lawn tennis court.

He is survived by his wife, daughter (Mrs. Geoffrey Harkness) and four brothers and one sister, to whom deepest sympathy by all his colleagues and friends is extended.

Dr. C. G. McDonald writes: I first met Latham in 1920 or 1921 when, accompanied by the late A. V. M. Anderson, he came to Sydney to observe methods of teaching and the medical activities of the Sydney clinical schools. He was at that time, I think, already Stewart Lecturer in Medicine of the University of Melbourne. From that time onward I saw much of both up to the times of their deaths.

Latham was a rarity among medical men in that he not only achieved distinction as a physician, but was a classical scholar of such repute that he could rub shoulders with professors of Greek and Latin in any part of the world. His classical knowledge determined in some degree his character. Essentially earnest and serious, he had that quality of *gravitas* which he so much appreciated in the ancient Romans during the period of the Republic. Few who heard him speak in the Stawell Hall of The Royal Australasian College of Physicians in May, 1949, as he introduced Professor Trendall to a mixed audience of doctors and lay persons, will forget the masterly little speech which he made, at once learned and popular, direct and restrained, and tempered with a quiet but very charming humour.

Others may speak of Latham's achievement as a Deputy Chancellor and a member of the Council of the University of Melbourne, or of his qualities as a physician. My opportunities to study him were mainly in private company or when he took his seat as a Councillor of the College of Physicians. On this he was a tower of strength, conservative, it is true, but ever honest and direct in the expression of his opinion and always anxious for the success of the College which he served so well. He was sixth in the line of succession to the presidency of the College, and no one upheld the dignity of that high office better than he. His name will go down in the archives of the College as one who helped to establish it on a firm foundation, who was always jealous of the reputation of physicians and who, by his life and activities, added lustre to his profession.

CONSTANCE ELIZABETH D'ARCY.

We regret to announce the death of Dame Constance Elizabeth D'Arcy, which occurred on April 25, 1950, at Sydney.

HENRY HIGHAM WIGG.

We regret to announce the death of Dr. Henry Higham Wigg, which occurred on April 22, 1950, at Aldgate, South Australia.

Post-Graduate Work.

THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

PROGRAMME FOR JUNE, 1950.

Lectures by Professor F. J. Browne.

LECTURES by Professor F. J. Browne, Emeritus Professor of Obstetrics and Gynæcology in University College, London, will be given on the following dates.

Tuesday, June 6: "The Significance of Signs and Symptoms in Toxæmias of Late Pregnancy."
Thursday, June 8: "The Diagnosis and Management of Contracted Pelvis and Disproportion."

These will commence at 8.15 p.m. at the hall of the Royal College of Obstetricians and Gynæcologists, Victorian State Committee, at 122 Flinders Street, Melbourne (Victorian Red Cross Headquarters). Attendance fees, 10s. 6d. per lecture, are payable to the Melbourne Permanent Post-Graduate Committee.

In addition, the Women's Hospital has arranged for Professor Browne to conduct two ward rounds at 4.30 p.m. on Wednesday, June 7, and Friday, June 9. There will be no fee.

Professor Browne's visit has been organized through the Australian Post-Graduate Federation in Medicine.

Courses for M.D. Part II and M.R.A.C.P.

Courses suitable for candidates for M.D. Part II and M.R.A.C.P., consisting of lectures and clinical demonstrations, will be conducted as follows.

Cardiology.

A course in cardiology, under the direction of Dr. Frank J. Niall, will be held as follows. June 8: "Congenital Heart Disease and Its Treatment", Dr. H. B. Kay. June 13: "Significance of Non-Cardiac Factors in the Management of Heart Disease", Dr. M. Davis. June 15: "Diseases of the Aortic Valve", Dr. K. Grice. June 20: "Radiology in Heart Disease", Dr. L. Rothstadt. June 22: (*a*) "Drug Treatment in Cardiology", (*b*) "The Simulation of Heart Disease", Dr. F. Niall, Dr. J. Hughes and Dr. L. Murphy. June 27: "Electrocardiography, including Unipolar Technique", Dr. J. Horan and Dr. R. M. Biggins. The fee for this course is £3 3s., or 10s. 6d. per demonstration.

Gastro-Intestinal Disorders.

A course in gastro-intestinal disorders, under the direction of Dr. Ian Wood, will be held as follows. June 29: "Œsophagus and Upper End of the Stomach", Dr. P. J. Parsons. July 4: "Gastric and Duodenal Ulcer", Dr. R. R. Andrew. July 6: "Chronic Gastritis and Carcinoma of Small Bowel", Dr. I. J. Wood and Dr. R. K. Doig. July 11: "Colon and Rectum", Dr. G. Penington. July 13: "Liver and Pancreas", Dr. W. E. King. The fee for this course is £2 12s. 6d., or 10s. 6d. per demonstration.

Week-End Course at Mooroopna.

The following lectures will be delivered in a week-end course at Mooroopna on June 17 and 18.

Saturday, June 17: 2.30 p.m., Dr. R. M. Biggins, "Pituitary and Adrenal Problems in General Practice"; 8 p.m., Dr. Mostyn Powell, "Practical Aspects of Congenital Heart Disease".
Sunday, June 18: 10 a.m., Dr. Lance Townsend, "Miscarriage"; 2 p.m., Dr. B. Keon-Cohen, "The Painful Foot and Knee".

The fee for this course is £2 2s., or 10s. 6d. per demonstration. Enrolments should be made with Dr. Brian Schloeffel, 98 Maude Street, Shepparton.

Flinders Naval Depot.

At 2.30 p.m. on Wednesday, June 14, Mr. Heyworth Watson will lecture on "Deafness" at the Flinders Naval Depot, by arrangement with the Royal Australian Navy.

Course Suitable for Candidates for D.D.R. Part II.

A course in radiodiagnosis suitable for candidates for the diploma of diagnostic radiology, but open to all practitioners, will be conducted on Monday and Wednesday

afternoons at 4.30 p.m., commencing on May 22, 1950, and continuing till August, 1950. The fee for this course is £21 and enrolments should be made with the secretary of the committee as soon as possible at 426 Albert Street, East Melbourne (JM 1547).

During the same period the committee will arrange a series of lectures in special pathology suitable for candidates for D.D.R. Part II, supplementary to the basic pathology lectures conducted at the university.

The Royal College of Obstetricians and Gynaecologists.

REGIONAL COUNCIL IN AUSTRALIA.

ELECTION.

THE result of the election held on April 15, 1950, for the *Regional Council in Australia of the Royal College of* Obstetricians and Gynæcologists was as follows.

New South Wales: F. A. Maguire, F.R.C.O.G., B. T. Mayes, F.R.C.O.G., J. N. Chesterman, F.R.C.O.G., T. H. Small, M.R.C.O.G.

Victoria: J. W. Johnstone, F.R.C.O.G., W. I. Hayes, F.R.C.O.G., L. W. Gleadell, F.R.C.O.G., D. F. Lawson, M.R.C.O.G.

South Australia: B. H. Swift, F.R.C.O.G., W. F. Joynt, M.R.C.O.G., R. F. Matters, M.R.C.O.G.

Queensland: G. Shedden Adam, F.R.C.O.G., R. B. Charlton, F.R.C.O.G., L. W. Gall, M.R.C.O.G.

Western Australia: G. Ashburton Thompson, F.R.C.O.G.

Tasmania: W. K. McIntyre, F.R.C.O.G.

The first meeting of the newly elected council will be held in Brisbane on Saturday, June 3, 1950.

Australian Medical Board Proceedings.

NEW SOUTH WALES.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Practitioners Act*, 1938-1939, of New South Wales, as duly qualified medical practitioners.

Fetterplace, Reginald John, M.B., B.S., 1950 (Univ. Sydney), Saint Vincent's Hospital, Darlinghurst.

Finch, Richard Tennant, M.B., B.S., 1950 (Univ. Sydney), Western Suburbs Hospital, Croydon.

Fischer, Enid May, M.B., B.S., 1950 (Univ. Sydney), St. George Hospital, Kogarah.

Fitzsimons, Eric Joseph, M.B., B.S., 1950 (Univ. Sydney), 6 Kendall Street, Bondi Junction.

Flood, Martin Joseph, M.B., B.S., 1950 (Univ. Sydney), Mater Misericordiæ Hospital, Crow's Nest.

Fogl, Henry Walter, M.B., B.S., 1950 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Ford, Beryl Irene, M.B., B.S., 1950 (Univ. Sydney), Rachel Forster Hospital for Women and Children, Redfern.

Forman, Ralph William, M.B., B.S., 1950 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Frost, Peter Taylor, M.B., B.S., 1950 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.

Garner, Margaret Flora, M.B., B.S., 1950 (Univ. Sydney), *93 Austin Street, Lane Cove.*

Gilbert, Elaine Therese, M.B., B.S., 1950 (Univ. Sydney), Bathurst District Hospital, Bathurst.

Goodman, Harry Thomas, M.B., B.S., 1950 (Univ. Sydney), Saint Vincent's Hospital, Darlinghurst.

Grahame, Barbara Ellen, M.B., B.S., 1950 (Univ. Sydney), *22 Bishopgate Street, Wickham, 2N., New South* Wales.

Gray, Kenneth Roy, M.B., B.S., 1950 (Univ. Sydney), Mater Misericordiæ Hospital, Crow's Nest.

Grieve, Shirley Euphrosyne, M.B., B.S., 1950 (Univ. Sydney), 19 Blenheim Street, Randwick.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED APRIL 15, 1950.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.[2]	Australian Capital Territory.[2]	Australia.[2]
Ankylostomiasis	*	1	..	..	..	..	..	..	1
Anthrax	*	..	..	..	..	..	..	..	..
Beriberi	*	*	..	*	*	*	..	*	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	2(1)	2(2)	1	..	1(1)	..	..	..	6
Cholera	..	..	..	..	..	..	..	..	..
Coastal Fever(a)	*	*	..	*	*	*	*	*	..
Dengue	*	*	*	*	*	*	..	..	..
Diarrhœa (Infantile)	..	..	2(1)	..	..	..	..	..	2
Diphtheria	11(8)	14(6)	6(5)	..	4(3)	..	..	..	35
Dysentery (Amœbic)	*	..	..	..	..	..	..	..	..
Dysentery (Bacillary)	*	..	2(2)	..	..	..	..	..	2
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..
Erysipelas	*	*	*	2(2)	*	*	..	..	2
Filariasis	*	..	..	..	..	..	..	..	..
Helminthiasis	*	..	*	*	*	*	*	*	..
Hydatid	*	*	*	*	*	*	*	*	..
Influenza	*	*	*	..	*	*	..	*	..
Lead Poisoning	*	*	..	*	*	*	*	*	..
Leprosy	..	..	..	..	3	..	..	..	3
Malaria(b)	*	..	..	..	..	..	..	..	..
Measles	*	*	*	8(7)	*	*	..	6	14
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	6(5)	7(2)	..	28(27)	..	1	..	..	42
Psittacosis	*	..	*	..	*	*	*	*	..
Puerperal Fever	1	..	2(1)	1(1)	..	..	..	..	4
Rubella(c)	*	*	..	*	..	*	..	..	..
Scarlet Fever	21(16)	25(17)	2(1)	5(3)	4(3)	4	..	1	62
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	*	..	1(1)	*	*	*	*	*	1
Trachoma	*	..	..	*	*	*	*	*	..
Tuberculosis(d)	12(10)	6(5)	13(9)	8(6)	8(3)	2(1)	..	..	49
Typhoid Fever(e)	..	2(1)	..	..	..	..	..	..	2
Typhus (Endemic)(f)	..	..	..	..	3(3)	..	..	..	3
Undulant Fever	..	..	..	..	..	..	..	..	..
Weil's Disease(g)	*	*	..	*	*	*	*	*	..
Whooping Cough	*	*	*	3(3)	*	*	..	..	3
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] The form of this table is taken from the *Official Year Book of the Commonwealth of Australia*, Number 37, 1946-1947. Figures in parentheses are those for the metropolitan area.

[2] Figures not available.

[3] Figures incomplete owing to absence of returns from the Northern Territory.

* Not notifiable.

(a) Includes Mossman and Sarina fevers. (b) Mainly relapses among servicemen infected overseas. (c) Notifiable disease in Queensland in females aged over fourteen years. (d) Includes all forms. (e) Includes enteric fever, paratyphoid fevers and other Salmonella infections. (f) Includes scrub, murine and tick typhus. (g) Includes leptospiroses, Weil's and para-Weil's disease.

Hales, Ian Barnewall, M.B., 1950 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.
Hann, Lionel Frederick, M.B., B.S., 1950 (Univ. Sydney), St. George Hospital, Kogarah.
Hansen, Thomas John, M.B., B.S., 1950 (Univ. Sydney), Hospitals Board, Maryborough, Queensland.
Harbison, Ronald George, M.B., B.S., 1950 (Univ. Sydney), Sydney Hospital, Sydney.
Harden, William George, M.B., B.S., 1950 (Univ. Sydney), Sydney Hospital, Sydney.
Harris, Henry, M.B., B.S., 1950 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
Harris, Keith Wallington Hills, M.B., B.S., 1950 (Univ. Sydney), Royal Perth Hospital, Perth, Western Australia.
Hawkins, Hilary Margaret, M.B., B.S., 1950 (Univ. Sydney), Rachel Forster Hospital for Women and Children, Redfern.

The following additional qualifications have been registered:

Morson, Stuart Mackenzie, 143 Macquarie Street, Sydney (M.B., B.S., 1938, Univ. Sydney), M.S., 1947 (Univ. Sydney).
Murray, Ronald Elliott, Grace Avenue, Sorlie, French's Forest (M.B., 1927, Univ. Sydney), D.P.H., 1949 (Univ. Sydney).

TASMANIA.

THE undermentioned has been registered, pursuant to the provisions of the *Medical Act*, 1918, of Tasmania, as a duly qualified medical practitioner:

Pawsey, Clarence John Kendall, M.B., B.S., 1949 (Univ. Melbourne), Launceston General Hospital, Launceston.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Richards, John Grahame, M.B., B.S., 1950 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
Mickler, Morris, M.B., B.S., 1921 (Univ. Durham), c.o. Post Office, Forster, New South Wales.
Schmalzbach, Oskar, registered under Section 21, *Medical Practitioners Act*, 1938-1945, 85A Ocean Street, Woollahra.
Quinn, John Vincent, M.B., B.S., 1948 (Univ. Sydney), 12 Hebden Street, Lockhart, New South Wales.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association:

Rikard Bell, Richmond Baker, M.B., B.S., 1950 (Univ. Sydney), 74 Chatham Road, Denistone.
Brown, Judith MacArthur, M.B., B.S., 1950 (Univ. Sydney), Maitland Hospital, Maitland.
Collins, Margaret Gladstone, M.B., B.S., 1950 (Univ. Sydney), 54 Benelong Crescent, Bellevue Hill.
Fitzsimons, Eric Joseph, M.B., B.S., 1950 (Univ. Sydney), 6 Kendall Street, Bondi Junction.
Garner, Margaret Flora, M.B., B.S., 1950 (Univ. Sydney), Goulburn District Hospital, Goulburn.
Gregory, Anna, M.B., B.S., 1947 (Univ. Sydney), Broughton Hall Psychiatric Clinic, Wharf Road, Leichhardt.
Harmey, Allan John, M.B., B.S., 1946 (Univ. Sydney), c.o. Dr. S. K. Dwyer, Mann Street, Gosford.
Jaconelli, Joseph, M.B., B.S., 1947 (Univ. Sydney), 11 Kingsway, Cronulla.
Joyce, Patrick Raymond (Surgeon Lieutenant, R.A.N.), M.B., B.Ch., 1946 (National University, Ireland), H.M.A.S. *Penguin*, Balmoral, Sydney.
Mackie, Bruce Stephen, M.B., B.S., 1948 (Univ. Sydney), 35 Kerr Street, Mayfield.
Marshall, Stanley Francis, M.B., B.S., 1948 (Univ. Sydney), St. George Hospital, Kogarah.
Nelson, Norma Marjorie, M.B., B.S., 1950 (Univ. Sydney), 59 Kangaroo Street, Manly.
Toakley, Natalie, M.B., B.S., 1950 (Univ. Sydney), 53 Roslyn Gardens, Elizabeth Bay.
Cummins, Cyril Joseph, M.B., B.S., 1938 (Univ. Sydney), 8 Bona Vista Avenue, Maroubra Bay.

The undermentioned have applied for election as members of the Tasmanian Branch of the British Medical Association:

Adams, Audrey Belle, M.B., B.S., 1949 (Univ. Melbourne), General Hospital, Launceston.
Officer, John Cairns Suetorius, M.B., B.S., 1949 (Univ. Melbourne), General Hospital, Launceston.

Diary for the Month.

MAY 9.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 12.—Queensland Branch, B.M.A.: Council Meeting.
MAY 15.—Victorian Branch, B.M.A.: Finance, House and Library Subcommittee.
MAY 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.
MAY 17.—Western Australian Branch, B.M.A.: General Meeting.
MAY 18.—New South Wales Branch, B.M.A.: Clinical Meeting.
MAY 18.—Victorian Branch, B.M.A.: Executive Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135 Macquarie Street, Sydney): Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178 North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

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